Putting the Trust Back in the New Jersey Transportation Trust Fund

July 2005

Regional Plan Association
NJ CT NY

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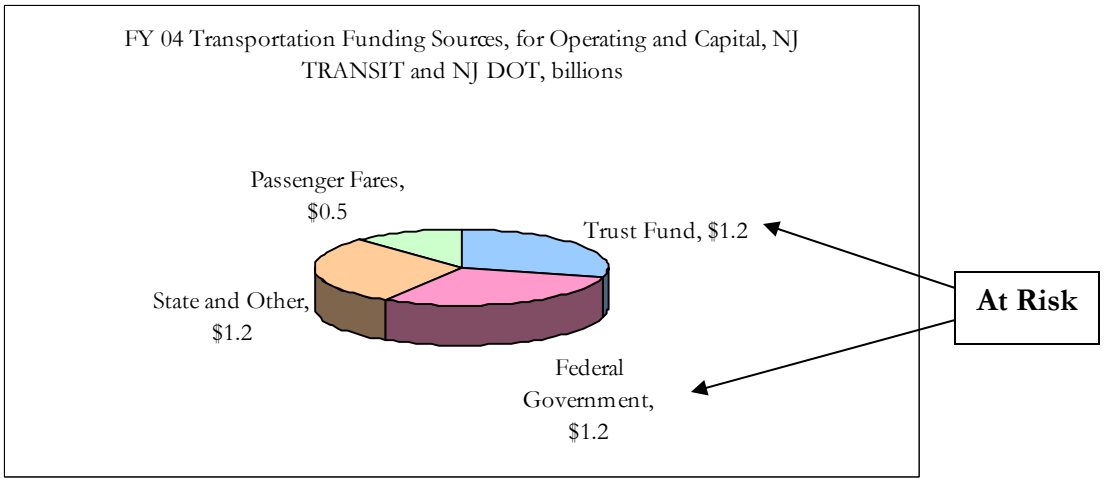
The Day of Reckoning: June 30, 2006

Though property tax relief and school funding are the fiscal issues that have dominated public debate in New Jersey in recent months, the state's most pressing financial problem is transportation funding. By June 30, 2006, New Jersey will have exhausted nearly all of the revenue sources it currently uses to pay the capital costs of building and maintaining its roads and mass transit systems. In fact, starting this July (2005), nearly all the state's gas tax will go towards debt relief. This year, the Trust Fund's capital generating capacity was stretched to June 30, 2006 through refinancing and GARVEE bonds, further tying up today's gas taxes and federal funding for future debt service.[1] The State has not sufficiently raised the revenue needed to pay for this past borrowing or to sustain investment going forward. As a result, New Jersey will have to pay for the next generation of infrastructure repair and improvement with new revenue that the Legislature and Governor will have to identify and raise.

Though it seems wildly implausible in the state with the second highest per capita income in the country and annual governmental revenues of many billions of dollars, by the middle of next year, road, bridge, rail, station and tunnel work could be jeopardized in New Jersey. This is a problem of both financing *capital construction* and funding the *operating budgets* of NJ TRANSIT (TRANSIT) and the New Jersey Department of Transportation (DOT). A recently enacted TRANSIT fare increase narrows these gaps, but closing the gaps using only fares and tolls would require abruptly raising them so high as to disallow the ridership needed for a well-functioning transportation system.

Figure 1


FY 04 Transportation Funding Sources, for Operating and Capital, NJ TRANSIT and NJ DOT, billions
Passenger Fares, $0.5
Trust Fund, $1.2
State and Other, $1.2
Federal Government, $1.2
At Risk

In 2004, New Jersey spent about $4.1 billion on transportation: $2.7 billion on capital projects, and $1.4 billion on operations. Thirty percent ($1.2 billion) of that comes from the Transportation Trust Fund. Another 30% comes from federal sources, many of which require matching funds provided by the Transportation Trust Fund.[2] The remaining $1.7 billion comes from a combination of state sources, the Port Authority of New York and New Jersey, fares and other system-generated revenue. In 2006, the Trust Fund will no longer be able to fulfill its mission. Millions in federal matching

[1] Even though its capital generating capacity is quickly approaching $0, in the first quarter of 2005 the New Jersey Transportation Trust Fund Authority was ranked the number 2 top issuer in the nation, with two bond issues of $1.7 billion (*The Bond Buyer*, April 4, 2005, page 43).

[2] These numbers are from the agencies' FY 2004 adopted budgets, also reported in the Blue Ribbon Transportation Commission report.

dollars are at stake. Much of New Jersey's $4 billion transportation budget will disappear without the Trust Fund.

Fiscal irresponsibility in Trust Fund management now threatens to end a quarter of a century of unparalleled prosperity and growth in New Jersey. Over the next year, New Jersey will either avoid facing this problem with some patched up financial expedient that, a few years in the future, will leave New Jersey worse off than ever, or take the approach of fiscal responsibility and thoughtful long term investment outlined in this report and spark another quarter of century of growth.

A Transportation-Driven Economy

This issue resonates with all residents of New Jersey, not just government and the transportation industry. Transportation is the driver of New Jersey's economy. There are strong links between accessibility, efficient transportation systems, economic advancement, and standard of living. Everyone has a daily experience with the transportation system, be it on the roads, on train platforms, in bus shelters, or crossing bridges. It impacts the safety of children traveling to and from school, the security of cities served by transit and connected by roads, and the day-to-day speed and ease of life in the state. How people experience the transportation system is critical to the success of the state and the region as a whole. Pot holes, congested trains, infrequent buses, and closed bridges may seem like mere inconveniences in the short term, but in the long term they can add up to economic disaster.

Throughout most of the twentieth century, New Jersey had a nation-leading, highly-competitive transportation system – and a nation-leading economy built upon and supported by that transportation system.[3] Today's knowledge-based economy is even more dependent on efficient transportation than in the past. The movement of information in huge quantities and at incredible speeds has generated a need for even more mobility and increased transportation demand.[4] A key priority of transportation systems is to facilitate the commute of knowledge-based workers, and the key component of the commute is public transportation.

Efficient supply chain management also places enormous demands on transportation systems. Just-in-time inventory control in manufacturing and retailing requires large increases in the volume of truck shipments and deliveries. It is now possible to set very specific daily inventory levels, but the actual adjustment of those inventories requires many more frequent deliveries of smaller quantities than in the past. Roads and bridges are more important to the economy than ever.

Every increment of economic advancement
demands an equivalent increment
of transportation services advancement.

The bottom line is that a global economy requires a comprehensive global transportation grid. If New Jersey is not an efficient component of that transportation grid, then it will not continue to be

[3] The following section contains excerpts from Hughes, James W. and Seneca, Joseph J. "A Transportation-Driven World-Class Economy: New Jersey at Risk." Issue Paper No. 23, April 2005, attached in Appendix A.

[4] Initially it was predicted that technological changes would mean people travel less and depend less on transportation infrastructure. These predictions have been proven largely wrong. Similarly, the promise that computerization would create the paperless office was wrong, and paper consumption keeps increasing.

a competitive component of the global economy. A faltering transportation system, like that now faced by New Jersey, will have bleak economic consequences on a very large scale.

New Jersey's Transportation Infrastructure

New Jersey's transportation system is dense, heavily-used, and old. On a per square mile basis there are more miles of highway in New Jersey than in any other state. Its 39,000 miles of highway are more heavily used than any other – on average almost 2 million miles are traveled on each mile of streets and highways in New Jersey, more than doubling in use in the mid-1960s. This intensity of use of New Jersey's road system is more than the surrounding states of New York, Pennsylvania and Delaware, and even more than the auto-oriented states of California, Texas, and Florida.

New Jersey built its highways early. By 1960, four of every five miles of streets and highways in place today were already built (see Appendix B). Most of the system is now 30 to 55 years old, and some of it even older. The state's limited access network (freeway and toll roads) is similarly aging. This 23-year heyday of highway expansion, triggered by funding from the toll roads in the 1950s (the New Jersey Turnpike and Garden State Parkway) and the federal interstate system into the 1970s, has now for all practical purposes ended, the result of a combination of high cost, community opposition and concerns about sprawl. Consequently, this road system – mostly approaching or exceeding a half-century in age – is in constant need of repair, replacement or upgrading.

The average age for New Jersey bridges is 47 years and 40% of all bridges are older than 50 years, the point when major rehabilitation or total replacement typically is in order. Almost one in seven of New Jersey's 2,300 bridges is structurally deficient, with its condition threatened by truck traffic volumes growing and projected to grow by 2.7% per year, which translates into 80% more trucks by 2020 (compared to the base of 1998).

New Jersey's transit network is similarly large and old. TRANSIT was created in 1979 as the nation's only statewide transit agency to assume operation and control of a bankrupt network of private bus and rail companies that were incapable of reinvesting in their infrastructure. New Jersey's public transit network, pieced together from the vestiges of eleven 19th century rail companies and the third largest bus network in the nation, has been the recipient of $15 billion of capital investment in rolling stock, buses, tracks, signals, stations, parking, and maintenance facilities in the last 25 years. TRANSIT's investment has brought these systems back from near collapse and closer to a state of good repair. The rail system has also been the recipient of funds for several major projects including the Kearny and Montclair Connections, and the Secaucus Transfer that have linked the historically disconnected network, and two new light rail lines.

The transit system today serves multiple functions. Its bus network provides a dense web of routes in urban areas for those without automobiles. In Newark, Jersey City, Elizabeth, New Brunswick, Paterson, Trenton, Camden, Atlantic City, and numerous other cities and towns, buses offer a lifeline of mobility for residents who do not drive or own cars, and often offers a better choice than driving for many. The bus network also delivers thousands of commuters each day to jobs in Newark, Manhattan, and Philadelphia, serving those areas of New Jersey without adequate rail transit.

The commuter rail system is largely geared to delivering commuters to Manhattan, where high paying jobs are made accessible to New Jersey residents and a well educated labor force is made accessible to New York businesses. The newly-built light rail line along the Hudson knits together

the old and newer residential and commercial centers from Bayonne to West New York. South Jersey light rail is intended to spur development in a long-neglected part of the state.

The bus and rail systems, plus the rapid transit systems of PATH in the north and PATCO in the south, are important in removing some cars from the road and relieving congestion. In part due to transit, New Jersey has the fourth lowest vehicle use per capita in the nation after transit-rich New York, highway-poor Alaska and physically-constrained Hawaii. The transit network also benefits the environment by improving air quality, lowering energy consumption, and lessening the pressure to expand highways.

The value of these highway and transit networks is threatened if they cannot provide quality and affordable service. Without adequate resources, disinvestment begins. In the case of the highway network, delays in repairs and stretched-out repaving schedules will force weight limitations on bridges and create bottlenecks at outmoded interchanges. Poor, unreliable driving conditions will diminish the attractiveness of the state to both residents and businesses.

Faced with funding limitations, the transit network can easily fall back to the days of perpetually late trains and buses, as infrastructure is unattended and maintenance schedules are extended. These limitations can slow or stop the expansion of the network into areas now without transit. Lack of funding can also limit peak period (rush hour) capacity where it is most needed, most notably across the Hudson River.

How did the Transportation Trust Fund go broke when millions are collected each year in gas taxes?

Too many demands;
too few resources;
insufficient accountability.

The Trust Fund started out in 1984 as an experimental solution to the need for capital investment in transportation. It was intended as an antidote to highly unstable and insufficient funding. The Trust Fund Authority became responsible for issuing bonds and investing Trust Fund revenues, but was not charged with participating in the development or management of the capital programs at DOT or TRANSIT, and was not to be involved with the management of federal funds. The Trust Fund did not address operating costs, leaving those to the General Fund. The Trust Fund was only to be used for capital projects, such as rebuilding bridges, highway rehabilitation and expansion, transit system improvements and new rail cars and buses. Operations, including maintenance and day-to-day personnel costs, were not to be paid for out of the Trust Fund. It was also to function primarily on a pay-as-you-go basis: the revenue coming in to the Trust Fund was to be mostly spent as it was collected, not borrowed against.[5]

At first, the Fund was soundly managed, on a self-replenishing basis, by an investment program that used a fraction of the funds to pay debt service on bonds and the majority for pay-as-you-go transportation investment. Then policy makers directed the Trust Fund to stray from its original intentions quite dramatically. Now, not only has the Trust Fund borrowed against most of its $805

[5] Chief Financial Officer. Background Report: History and Status of Transportation Trust Fund Legislation and Financing. New Jersey Department of Transportation, March 2003.

million in revenue sources so that its capital generating capacity is about to end, but it has diverted some of its spending to fill large gaps in operations. The Trust Fund has effectively begun paying for operations. In household terms, New Jersey is taking out a home equity loan to pay for its heating bill.

New Jersey faces the 2006 day of reckoning because while the capital program was growing over the last 20 years, constitutionally dedicated revenues to the Trust Fund were stagnant and statutorily dedicated revenues stopped being appropriated. The capital program was five times larger in 2005 than in 1985. During these 20 years of growth, the State only increased taxes for transportation purposes once (the 2.5 cent gas tax increase in 1988). To make up for the increasing demands and decreasing revenues, the Trust Fund Authority increased its use of bonding, using larger bonds with longer maturities. **The core of the problem was that, starting over a decade ago, leaders chose short-term responses such as tax cuts, one-shot deals, and no toll or fare increases, over long-term solutions.** A race to the bottom ensued and for many years it was thought to be political suicide to be identified as a supporter of revenue increases and other fiscally prudent measures.

Tax cuts were sold as free and painless, not as something that would inevitably require major cutbacks in state government spending. Budgets were balanced by shifting money for capital construction to basic operations. Fares were not allowed to increase to keep pace with inflation and other expenses, for fear of voter backlash. As the bills came due, New Jersey engaged in a series of increasingly dubious fiscal maneuvers including massive borrowing, pushing expenses onto local government, and depleting reserves.

The Transportation Trust Fund, designed to be New Jersey's stable, predictable and sufficient source of transportation investment, was sacrificed. The recession of the early 1990s and New Jersey's increasing needs for transportation investment applied pressure on the Fund's initially prudent management. Borrowing was substantially, but temporarily, increased.

In 1995, the state prepared to embark on an ambitious spending program including three TRANSIT light rail projects. The state government, however, was unwilling to raise taxes or fares and to tell New Jersey residents that the logical consequence of a costly program and no new revenues would eventually be a reduced program and more costly services. The state government departed from using pay-as-you-go funding for transportation capital projects in favor of using most of the Trust Fund revenues to support the issuance of long-term transportation bonds. This switch to long term borrowing allowed the transportation capital program to virtually double, but obscured problems in the TRANSIT operating budget and avoided the need to do what should have been done: increase revenues in an orderly way.

In 2000, Trust Fund renewal gave New Jersey a chance to right the foundering Transportation Trust Fund, but it made no fundamental reforms. Instead, leaders further increased the size of the program, dedicated revenues from the General Fund (raising the constitutionally dedicated annual revenue to $805 million), continued the diversion of capital into the operating budget and bonded most of the available revenue. As problems mounted in the annual state budgeting process, the state next reduced the appropriated amount of operating assistance to TRANSIT, and ceased appropriating $114.5 million in statutorily obligated funds to the Trust Fund. During the last four years those policies were not reversed: TRANSIT operating funds remained far too low and the Trust Fund lost a major dedicated revenue source.

The Trust Fund is down to $0 capital generating capacity.

Figure 2

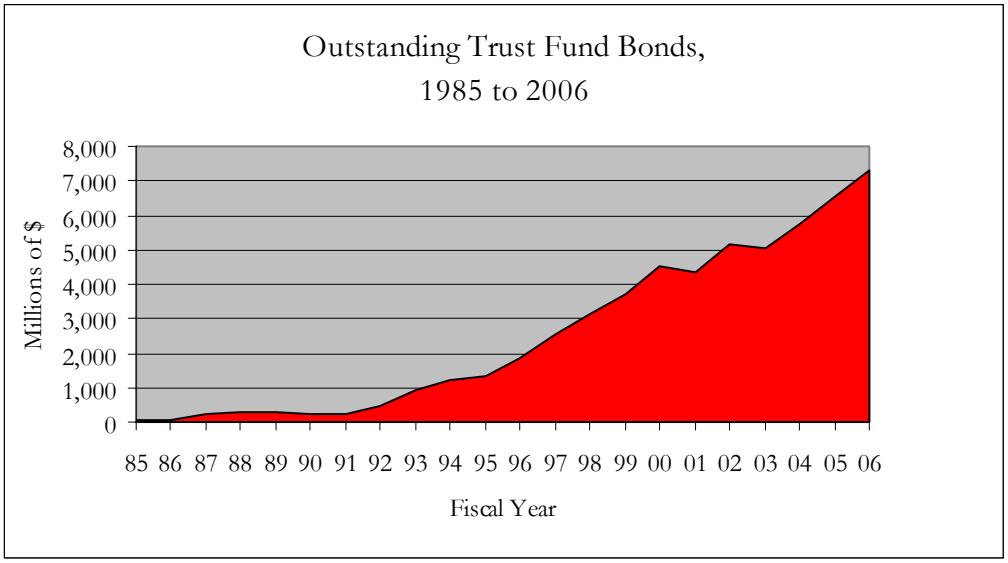
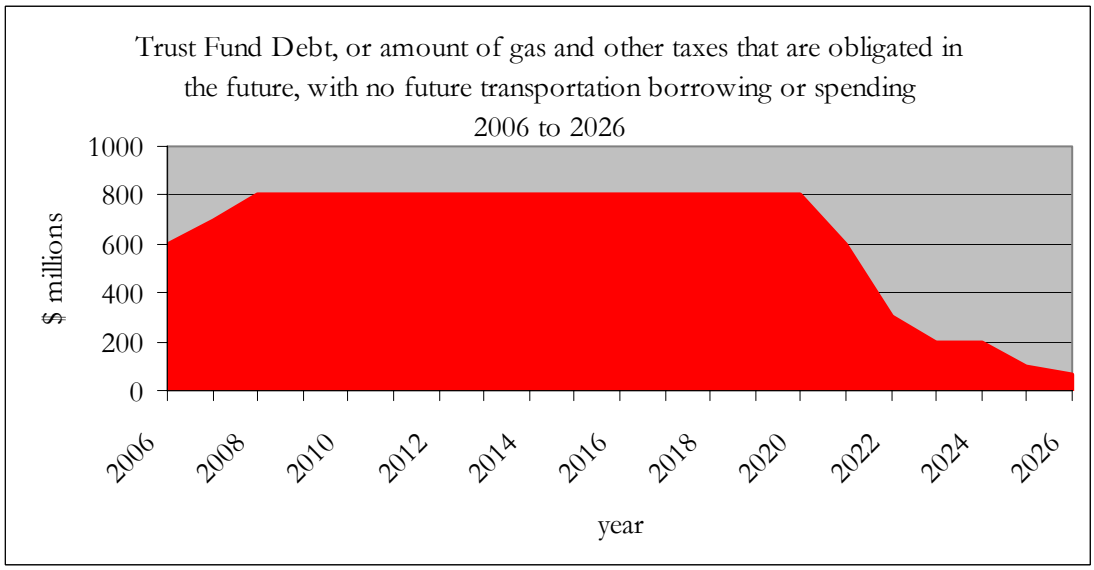


Figure 3



Now, with all of the Trust Fund's revenues pledged to repay bonds, New Jersey is stuck with an $805 million dollar a year bill for debt service that must be paid faithfully through 2021, leaving no money for new transportation investment.

The simple fact is that the responsibility for New Jersey's transportation funding crisis is bipartisan, just as is the responsibility for fixing it.

The day of reckoning is just around the corner. The Transportation Trust Fund will be bonded out at the end of this fiscal year, June 30, 2006. An attempt to increase the gas tax to add new funds at the end of 2003 was unsuccessful despite a forceful and sobering report from the Governor's Blue Ribbon Transportation Commission. The Trust Fund remains broke, and the clock is ticking towards transportation investment shutdown and abrupt and painful increases in TRANSIT fares.

An Honest Assessment

New Jersey's transportation system is under assault from a massive fiscal cancer. Treating it will require facing painful and difficult choices. But ignoring it will be so much worse.

If New Jersey is to maintain the transportation infrastructure that was the foundation of its prosperity in the last quarter century, it must invest billions of dollars over the next ten years. This means major new revenue sources must be identified and put in place to support transportation – both operations and capital programs. But just as tax cuts come with an obligation to face the issue of spending cuts, revenue increases impose a commensurate obligation: to prioritize proposed expenditures strategically and insure they are spent productively, so that proposed revenue increases are balanced against needs and kept affordable and reasonable. Sacrifices have to be made, and decisions should be based not on anxiety about the next election but on what will provide the most benefits for New Jersey taxpayers at the least cost in the long run.

To win public confidence in such an undertaking, advocates of revenue increases must offer a credible program for safeguarding the financial management of these resources. Considerable public skepticism exists about the political leadership's past management of the Transportation Trust Fund. DOT and TRANSIT have been expected to meet too many demands with too few resources. Structural reforms are a necessary, integral part of that Trust Fund reauthorization. To restore the long-term fiscal health of New Jersey's transportation system, fiscal and programmatic accountability reforms must be put in place. Mechanisms should assure that the Trust Fund's capital-generating capacity is sustained, that sound projects are selected for investment and that operating expenses are properly addressed. To be effective, those mechanisms must be transparent and sufficiently independent from political pressures.

How to Approach the Crisis

The three most important elements are restoring long term bondability to the Transportation Trust Fund, eliminating the use of capital funds for operating expenses, and providing for clear financial transparency and accountability.[6]

The task at hand is not as simple as raising the gas tax to finance the $1.2 billion per year provided by the Trust Fund in Fiscal Year 04. The question needs to be first, what reforms would assure the public that its tax money is being managed responsibly this time around; and second, what level of transportation spending is necessary to maintain New Jersey's transportation operations and economic vitality.

Without reform, the Trust Fund can easily empty out to $0 again, even after taxes are increased.

The Trust Fund is managed with insufficient oversight and accountability. The transportation budgeting processes are not connected to the capacity of the Trust Fund. Ambitious capital programs have been approved alongside structurally deficient operating budgets. The public does not know how much is collected from its gas and other transportation taxes, nor how the taxes are spent.[7] Improved accountability is necessary to prevent the Trust Fund Authority from repeating the cycle and once again incurring enough debt to propel the Trust Fund to functional insolvency.

[6] New Jersey was ranked second to California in having confusing accounting for its transportation resources, according to a study from Rutgers University: Glenn Beamer. "A Comparative Analysis of New Jersey Transportation Funding And Debt Management." Draft February 14, 2005.

[7] While some information is available about expenditures of a portion of the gas tax, auto sales tax and other related taxes, the full amount collected and its use is not clearly reported.

How NOT to Approach the Crisis[8]

(1) No New Taxes: What happens if New Jersey waits out the current crisis?
To highlight the need for new revenue and reform, let's assume that in 2006, New Jersey fails to raise revenues and waits for its current debt obligation to ease up so that current taxes once again become feasible sources of new spending. DOT and TRANSIT lose all but their system-generated revenues such as fares, fees and advertising. Billions of federal matching dollars are lost. System reliability and quality of operations declines. Since a large part of transportation operations are still relying on Trust Fund transfers, DOT is reduced to simple snow removal; bridges and roads badly in need of maintenance begin to crumble, some fail entirely and many are closed to traffic. TRANSIT cuts back service substantially and increases fares sharply. The roads become even more clogged as many would-be transit users are forced back into their cars by an unreliable, overpriced, infrequent transit system. Capital projects all but cease for the next ten years. Huge numbers of construction, logistics and other jobs are lost, and the economy suffers the hit. Needed expansion projects such as the Trans-Hudson Express Tunnel are delayed, and the region's businesses begin to look elsewhere for opportunities to grow. In short, the region backslides into an era of disinvestment and neglect, harming New Jersey's economy and quality of life. After 15 years, when the debt obligations finally ease, the Trust Fund can bond out all its resources, as it has done in the past, and once again ensure that New Jersey's transportation system will be stymied in the future.

(2) Business As Usual: What happens without structural and institutional reform?
What might happen if, in 2006, New Jersey raises the gas tax but does not implement any reforms? Let's assume that New Jersey raises the gas tax by 12.5 cents in 2006 and constitutionally dedicates it to the Trust Fund. The increase of 12.5 cents would raise about $562 million per year. Assuming that the agencies' spending level remains at $1.2 billion again as it was in FY 04 and increases at the rate of inflation, the 12.5 cent increase would only fund the transportation system for six years. In 2011, it would have to be increased substantially again. In reality, it would probably run out much sooner. Without reforms, at least part of the $562 million would leak into the General Fund. Without an independent entity such as the recommended five person Financial Policy Review Committee, the Trust Fund Authority could bond nearly all new revenue as it became available to support higher spending levels. Revenue might be less than expected: imposing a large increase in the gas tax all at once would likely deter some driving. In addition, since the tax is collected per-gallon, improved fuel efficiency might lead to lower revenue streams over time and an even greater share of the gas tax going to cover old debt. Over $300 million per year would continue to be diverted to cover operating costs. The statutorily dedicated funds of $114.5 million per year which were originally dedicated to the Trust Fund would continue to leak out into the General Fund. Without reports from the Director of the Division of Taxation, the public would still have no clear picture of how much their gas taxes raise. The increase of 12.5 cents would be fully obligated to pay debt until 2035.

Neither of these options is acceptable.

[8]It is assumed that gas consumption holds steady at 2003 levels, that the Trust Fund bonds out for 20 years at 1/10 debt service ratio, that inflation is 4% each year. All numbers on this page are rough estimates.

Guidelines
The management of the Trust Fund needs to be dramatically reformed in its next reauthorization. The way financing takes place and the amount and method of revenue collection also must be overhauled. There are several major points that will stand out as this report details its recommendations:

- The Trust Fund should not require a major overhaul again for at least 25 years.
- The operations structural deficit, particularly at TRANSIT, must be addressed, or it will undermine the capital budget. Public funding for the operations needs should be significantly expanded in the short term and continued for the long term
- A diversity of revenue sources should be used, not just the gas tax, to ensure adequate revenue levels and distribute the burden of paying for the transportation system more widely across the state.
- The TRANSIT rider must be part of the solution. TRANSIT fare increases should be predictable and related to normal growth in expenditures.
- Wherever feasible, transportation users who impose higher environmental, social, and economic costs should pay a higher share of the transportation costs.

The Bright Side
New Jersey's investment in transportation infrastructure over the last 20 years has been tremendously beneficial. If the leadership fixes the Trust Fund now, New Jerseyans can expect an improved quality of life in the short and long term. In the short term, new revenues supporting the Trust Fund will translate to better roads and bridges, more buses and trains, cleaner facilities and a safer system overall. In the long term, New Jersey residents will see an improved quality of life, with less road congestion, an expanded transit system, a healthier environment, and a thriving economy.

A fully-funded transportation system can help New Jersey sustain even greater economic growth by promoting smarter settlement patterns. New Jersey is fortunate to have accepted, for the most part, the tenets of smart growth. Anti-sprawl sentiment is fairly strong, and even non-transit riders acknowledge the importance of investing in a strong transit network. State Transportation Commissioner Jack Lettiere has been awarded the 2005 New Jersey Future Smart Growth award, in recognition of the "significant shift in transportation decision-making toward the use of modern, community-friendly and environmentally sound solutions to New Jersey's transportation problems."[9] Fixing the Trust Fund now can make New Jersey one of the nation's most desirable locations for residents and employers 20 years down the road.

Voters have shown they are willing to pay for better transportation infrastructure.

In November 2004, voters in 11 states faced local ballot initiatives to fund transportation. They overwhelmingly voted in favor of spending more on transportation, be it through taxes or tolls, toward transit or road improvements. Voters approved billions of dollars for light rail in Miami, commuter rail in Austin, and a monorail in Seattle, to name a few. The *USA Today* headline read, "Red state or blue, Americans sick of gridlock." A closer examination of the ballots reveals that

[9] See NJ Future's website at <http://www.njfuture.org/articles/SGAs.htm>

well-balanced proposals meet with success even where the public has rejected proposals in the past. In California, for example, local ballot initiatives need a supermajority of 2/3 to prevail. The strict requirement forces pro- and anti-growth parties to negotiate on ballot measures and bring high quality proposals to the people. Prior to the supermajority requirement, only half the ballot measures in California passed. Now that the bar has been raised, Californians are more often voting yes on the taxes and tolls put before them. Why is this good news for New Jersey? It shows that voters in a diverse state with a diverse set of transportation needs will support taxes and tolls when they know the money is going directly to their transportation system.

What do the agencies need?

New Jersey's transportation needs are substantial. New revenue is needed for both capital construction and day to day operations. Over the last 15 years, New Jersey saw increasing demands put on its aging roads, bridges and rails as well as the continuing need to replace and expand its transit fleet. Over the next 20 years, more can be expected; New Jersey's population and labor force are expected to grow significantly, leading to increases in travel demand. This growth needs to be absorbed in a state with a dense, old, and very heavily used transportation system.

Some of the 10-year needs are listed here. The full capital needs statements can be found in Appendix C, the Capital Improvement Strategy (March 2005). The Transportation Trust Fund has typically provided for about half the cost of the capital programs and projects. Operating needs are not stated in any official document, but can be estimated based on past expenditures, anticipated deficits and system-wide shortfalls.

Capital Needs

Roads: Less than half of the highway pavement in New Jersey is rated "acceptable," below the national average as well as the ratings for New York, Pennsylvania, Connecticut and Delaware. The Blue Ribbon Transportation Commission two years ago concluded that, absent substantial new investment, the current 47% acceptable rate will wither to 10% within a decade. The need at that time was identified as one billion dollars a year for 10 years.

Bridges: When the Blue Ribbon Transportation Commission completed its work in 2003, 87% of the state's bridges were rated as in "acceptable" structural condition; two years later, DOT reports that inventory has dropped to 83%. Even if funding is maintained at the current rate of $300 million per year, the number of acceptable bridges will continue to decline to 81% within a decade. Without further investment, the number will fall to 73% over that same time, according to DOT. The Blue Ribbon Transportation Commission identified the bridge need number at $7 billion over 10 years.

Municipalities: Largely funded by the Transportation Trust Fund, the Local Aid program has made many local road improvements possible. Local Aid applications now far outstrip funding. For example, in FY 05 DOT was able to approve less than half the 829 municipal aid funding applications it received and award less than one third of the $198.5 million in funding requested. The Safe Streets to School program drew 227 applications for $37.7 million in funding; DOT could award only $4 million for 45 proposals. Without renewal of the Transportation Trust Fund, county and municipal governments will have to rely on local property taxes to undertake such projects or abandon them altogether. These projects are estimated to cost $3.7 billion over ten years.

Transit: Over the next ten years, TRANSIT will need over $6 billion to bring its system to a state of good repair and maintain it at that level. This includes replacing 13 miles of track each year, working on a backlog of bridges and other structures that need repair or replacement, updating the signaling system, modernizing the bus and rail fleet, and rehabilitating stations. An additional $9 billion is needed to increase and expand core system capacity. Much of this will come from the federal government and other sources, but only if the Transportation Trust Fund can provide matching funds.

Other: DOT also has substantial ten year capital needs to continue and enhance program areas including pedestrian and bicycle, safety, maritime and aviation, and rail freight. TRANSIT has safety and customer service/technology needs as well. Both agencies have mandatory expenses, such as equipment and rolling stock leases, that will increase over time.

Operating Needs

Both TRANSIT and DOT have severe operating deficits. The TRANSIT practice of using capital funds to fill the gap has weakened its ability to meet its capital objectives. DOT's operating budget shortfalls have serious consequences on routine maintenance and basic operations. For example, the drainage system for roads and bridges should be cleaned once annually, but, given DOT's low operating budget, only 10% of the system is cleaned annually, usually when severe flooding occurs. The failure to perform adequate preventative maintenance has a multiplier impact on capital infrastructure repair and rehabilitation costs: as operations are under-funded, capital needs increase. For DOT, using capital funding for operations often leads to the use of more expensive contractors and fewer agency employees. The total net need for operations at DOT and TRANSIT, including ceasing the practice of capital-to-operating transfers, will be $8.3 billion over ten years.

The capital and operating needs of both agencies are summarized in Table 1.

Table 1

$ Billions	Operating		Capital		Total
10 Year Gross Needs, after eliminating capital-to-operating transfers					
DOT		4.50		26.60	31.10
TRANSIT		17.10		14.70	31.80
Total		**21.60**		**41.30**	**62.90**
Anticipated and Recommended Non-Trust Fund Resources					
DOT	Anticipated State aid & fees Anticipated Federal aid	1.17 0.90	Anticipated Federal aid	8.83	10.90
TRANSIT	Fares & other system-generated revenue Recommended fare increases Anticipated State aid	7.05 1.35 2.79	Port Authority, for Trans-Hudson Express Tunnel Anticipated Federal aid	4.07 4.43	19.69
Total		**13.26**		**17.33**	**30.59**
10 Year Needs, Net of Anticipated non-Trust Fund resources listed above.					
DOT		2.43		17.77	20.20
TRANSIT		5.91		6.20	12.11
Total		**8.34**		**23.97**	**32.31**

Non-Trust Fund Revenue

The agencies will not rely exclusively on the Transportation Trust Fund over the next ten years. They can anticipate support from the federal government, the state, the Port Authority, fares and other system-generated revenue, and other sources. TRANSIT anticipates federal sources including full funding grant agreements, formula funds, and CMAQ[10] funds will bring in $4.43 billion for its capital program over ten years. TRANSIT also optimistically anticipates another $4 billion from the Port Authority of New York and New Jersey for the Trans-Hudson Express Tunnel (ARC) project. On the operating side, TRANSIT can count on revenue from fares and other system-generated revenue. Another optimistic assumption, given state budget deficits, is that the state will contribute $2.8 billion over ten years from casino revenues and the General Fund for TRANSIT operations. DOT anticipates federal funding will cover $8.8 billion of the capital program.[11] On the operating side, federal funds are anticipated to cover $900 million, the state General Fund is expected to cover $1.07 billion, and fees and other sources will cover $108 million.[12]

The operating budget needs are estimated to be considerably higher than current appropriations. This is due to the addition of $200 million to DOT's long-starved operating budget and the elimination of over $300 million in capital-to-operating transfers. It is assumed that this report's recommended TRANSIT fare increases are implemented, decreasing the gap by approximately $135 million per year.

These program levels are much higher than they have been in the past. The table below shows average yearly expenditures since 1997.

Table 2

Past Programs, average year (in 2004 dollars, billions)		
DOT Operating	$	0.28
DOT Capital	$	1.49
TRANSIT Operating	$	1.13
TRANSIT Capital	$	0.99

There are several reasons the next ten years of transportation spending will be higher than in the past. First, past programs incorporated capital-to-operating transfers. Their strong bias toward capital and away from operating skewed the actual size of the programs; operations were starved, and future programs should not continue this pattern. Second, there have been, from time to time, influxes and contractions of revenue that affected the size of programs, making it difficult to compare past and future programs. Third, future programs are consistently larger because they include continuing expenditures for the multi-year projects initiated in past programs. Some projects requiring one-time large expenditures were started and finished within the last 10 years. Other large expenses are expected to occur over the next ten years, including major bridge repair costs and a need for new capacity crossing the Hudson as the region continues to grow (the Trans-

[10] Congestion Mitigation and Air Quality program

[11] $8.8 billion assumes federal contributions will remains at the levels anticipated in the State Transportation Improvement Plan for 2006 through 2008.

[12] These estimates, $900 million state general fund contribution and $108 million contribution from fees and other sources, are based on average past NJ DOT operations revenue, 1994 to 2004.

Hudson Express Tunnel). The final reason is debt – a mandatory expense pushed into future years, making future program needs larger.

Financing for Fiscal Responsibility

This report recommends the capital program be initially financed with short-term bonds, with a switch several years out to a mix of pay-as-you-go and longer term bonds.[13] This report further recommends that capital-to-operating transfers are eliminated. Assuming these two recommendations are implemented, and substantial non-state funding is available for the Trans-Hudson Express Tunnel project, a **stable and sufficient capital program can be achieved over the next 10 years with an average of $2 billion in new revenue annually.**

> ***Note on the Trans-Hudson Express Tunnel:*** Four billion dollars of TRANSIT's gross capital need is for the Trans-Hudson Express Tunnel (also known as Access to the Region's Core, or ARC). This project is critical to the economy of New Jersey and has been demonstrated to be in the interest of the state to "spend money to make money". Regional Plan Association has written two reports that detail the value for a new passenger rail tunnel.[14] The full case will not be repeated here; in short, the new tunnel is the only means to gain the capacity for New Jersey to tap into the huge and continually growing economic engine of Manhattan. TRANSIT's consultants concluded that the tunnel will generate $15 billion of economic benefit by 2025 and $25 billion by 2035, equally divided between New York and New Jersey.[15]

$8.35 billion is needed for operating expenses over the next ten years. These are divided between DOT's need of $2.4 billion and TRANSIT's of $5.9 billion. This full amount will have to come from pay-as-you-go sources. Fiscal prudence dictates that operating expenditures should not be met with borrowed funds. The Blue Ribbon Transportation Commission has recommended that 50% of the capital program be met with pay-as-you-go funds. However the Blue Ribbon Transportation Commission report did not fully account for operations. This analysis recommends meeting all actual operating expenditures with pay-as-you-go funds, and completely eliminating capital to operating transfers. This alone would make the Trust Fund more fiscally responsible than ever.

As shown in Figure 4, the cumulative operating needs are projected to grow over time, so that the revenue demand would be lower in the earlier years of the 10-year period and higher in the out years. In FY 07 the new revenue need for transportation operations is projected to be $740 million.

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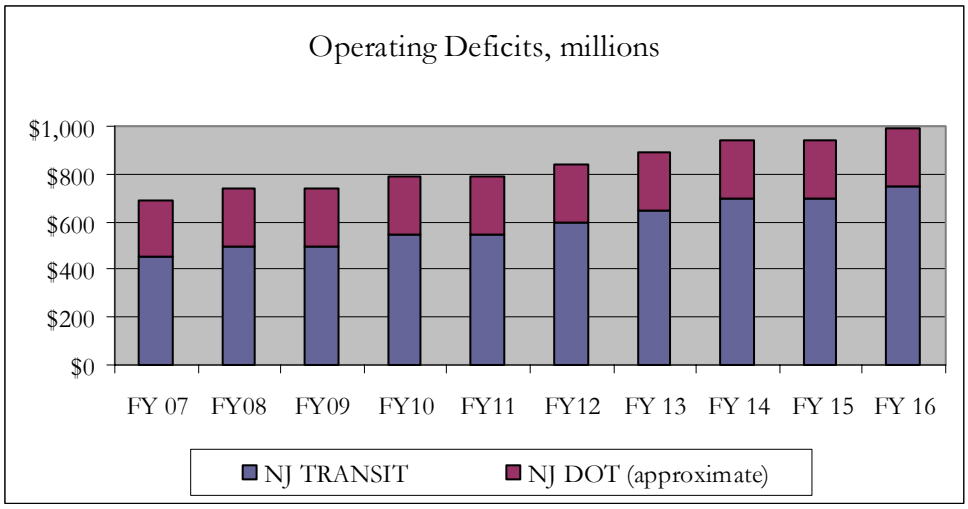
[13] It is assumed that the Trust Fund uses 10 year bonds for the first five year with a 0.14 debt service ratio and then switches to 20 year bonds with a 0.083 debt service ratio, and that 20% of the capital program will be funded with pay-as-you-go sources starting in 2016.

[14] *The Case for a New Passenger Rail Tunnel Under the Hudson River*, December 2003 and *Connecting Workers to Jobs: the Port Authority's Role*, March 2005.

[15] Economic and Fiscal Impacts of the ARC Project, Economic Research Associates, November 10, 2004

Figure 4



In summary, the new transportation revenue need begins at $2.69 billion annually in FY 07, increasing to $2.99 billion in FY 16.

Taking all the non-Trust Fund anticipated revenue sources into account, New Jersey will still have a gap of $32.31 billion over the next ten years. This estimate assumes the capital-to-operating transfers are eliminated, uses optimistic estimates of ARC, federal, and state General Fund funding, and assumes this report's recommended fare increase.

Table 3

Annual Net Needs, millions	Operating		Capital	Total
	NJ TRANSIT	NJ DOT (approximate)	New revenue needed given bonding (approximate)	New revenue needed
FY 07	$450	$240	$2,000	**$2,690**
FY08	$500	$240	$2,000	**$2,740**
FY09	$500	$240	$2,000	**$2,740**
FY10	$550	$240	$2,000	**$2,790**
FY11	$550	$240	$2,000	**$2,790**
FY12	$600	$240	$2,000	**$2,840**
FY 13	$650	$240	$2,000	**$2,890**
FY 14	$700	$240	$2,000	**$2,940**
FY 15	$700	$240	$2,000	**$2,940**
FY 16	$750	$240	$2,000	**$2,990**

To meet this new revenue demand, New Jersey's leaders and its citizens will be faced with hard choices.

Before considering how the revenue will be raised,
the public needs assurance that
this crisis will not recur in the future.

Major reforms are necessary to restore trust to the Trust Fund. DOT and TRANSIT should be able to assure the public, the Trust Fund Authority and the recommended five-person Financial Policy Review Committee that their needs statements include fully funded operating budgets. DOT and TRANSIT should use a 'fix it first' principle, which they have indeed been moving toward, to bring the system closer to a state of good repair. DOT should limit road capacity expansion to truly smart growth projects. While TRANSIT should not avoid meeting capacity needs with projects such as the Trans-Hudson Express tunnel (ARC), it must carefully consider stretching out or postponing projects past the 10-year forecast period. TRANSIT needs to determine what projects cannot be demonstrated to meet an immediate need or to be cost effective if built in the next ten years. Bond-ability should be permanently restored to the Trust Fund. The public should know exactly how much is collected from its taxes and how it is being spent.

REFORM

There are four main reasons the Trust Fund went astray. These substantiate the need for the recommended reforms.

1. Growth of capital program without commensurate increases in revenue,
2. Insufficient funding from non-Trust Fund sources for operations,
3. Leakage of Trust Fund revenue sources into the General Fund,
4. Lack of accountability and independent oversight.

1. Growth of capital program without commensurate increases in revenue

The size of the DOT and TRANSIT capital programs has increased dramatically in the last 20 years. The portion funded by the Transportation Trust Fund has grown from $250 million in 1985 to $1.2 billion in 2005, five times its original size. This is despite the fact that the Trust Fund reauthorization in 2000 envisioned a $950 million annual program.

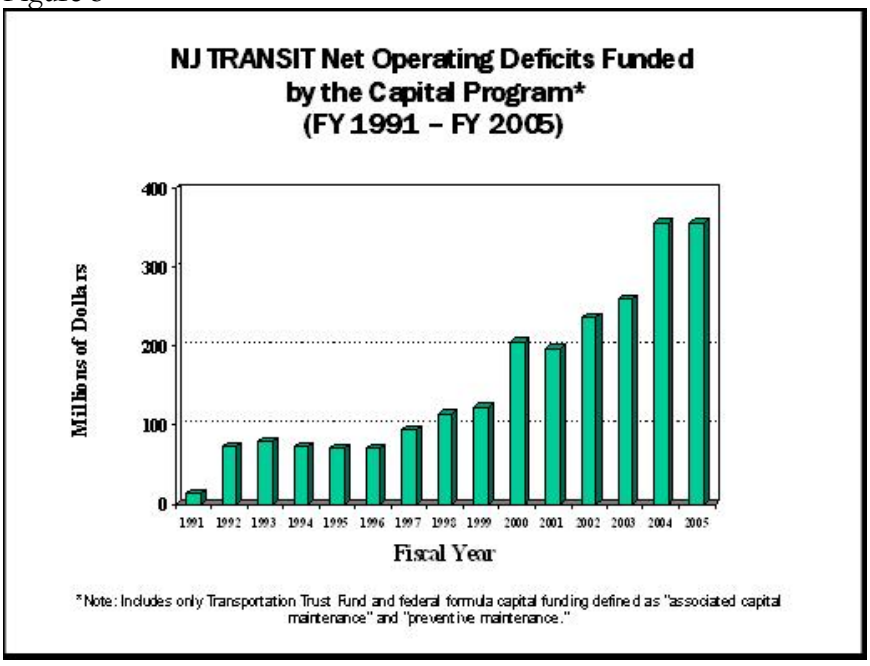
In New Jersey, capital plans are adopted without oversight from the Trust Fund Authority. Nonetheless, programs are routinely adopted that maximize use of revenue available from the Trust Fund. Over the years, a series of reauthorizations increased the bonding capacity and lengthened the terms of bonds that could be issued by the Trust Fund Authority, thus providing more and more revenue for capital programs. The TRANSIT New Starts program developed at this time was very ambitious, and the DOT capital programs grew steadily as well. However capital expansion leads to increases in operating and maintenance expenditures. The agencies did not account for the full future cost of the capital programs adopted in the last 10 years. Revenues were not increased; while capital and operating needs grew, fares remained static and only one new constitutionally dedicated revenue sources increased (the gas tax, by 2.5 cents, in 1988). Instead of new revenue sources, the Trust Fund Authority used longer bond terms to issue more money, tying more of it up in the future. While costs went up, the capital generating capacity of the Trust Fund went down.

TRANSIT capital program growth offers a good example. In 1999 and 2000, a major source of operating funds was terminated by federal mandate.[16] Operating deficits grew, and instead of being filled with fare increases or legislative appropriations, they were filled with diverted federal and state capital funds. This depleted the amount of capital funds actually available for capital projects substantially (about 30%). TRANSIT was incurring debt on the capital side to pay for rolling stock acquisitions, further restricting $100 million per year in capital funds, and depleting the amount available for capital projects. With only 50% of capital funds left for capital projects, and no programmatic oversight from the Trust Fund Authority, TRANSIT approved several expensive light rail projects including the South Jersey Light Rail and the Hudson-Bergen Light Rail. These New Starts were premised on optimistic anticipated revenue estimates and TRANSIT believed they would not take much away from the rest of the capital program. In the end the anticipated revenue came up short, and the light rail projects cost nearly $2 billion – much more than anticipated, mostly due to the South Jersey Light Rail – in state and federal funds that could have been used on other capital projects. More than 2/3 of capital funds had been spent on supporting the operating budget, paying for debt, and funding ambitious new projects based on flawed assumptions. The Trust Fund Authority was not established with the intention of overseeing programmatic decisions, and without this oversight TRANSIT's program grew even as it was becoming increasingly consumed with debt and mounting operating deficits.

2. Insufficient funding from non-Trust Fund sources for operations

TRANSIT anticipates it will need to move $310 million per year from its capital resources to subsidize operations if the current transportation funding structure remains unchanged. This is a conservative estimate. (Note that approximately one-half of this money has come from federal formula funds, not the Transportation Trust Fund.) TRANSIT's capital-to-operating transfers have increased over time, as shown in Figure 5.

Figure 5[17]


NJ TRANSIT Net Operating Deficits Funded by the Capital Program*
(FY 1991 – FY 2005)
Millions of Dollars
400
300
200
100
0
1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005
Fiscal Year
*Note: Includes only Transportation Trust Fund and federal formula capital funding defined as "associated capital maintenance" and "preventive maintenance."

[16] Leveraged leasing proceeds

[17] Source: Blue Ribbon Transportation Commission report, 2003.

TRANSIT recognizes that using funds intended for capital programs on operations is problematic, and its current plans cap the amount that can be transferred from capital to operating. For its operations needs, DOT receives a small contribution from the state General Fund, and another small portion from the Federal Highway Administration for permitted operating expenses related to specific capital projects. DOT's operating budget has used between $50 and $80 million per year of Trust Fund revenue. Even at this level, however, DOT's operations are under-funded. This affects the system as a whole. The failure to perform adequate preventative maintenance has a multiplier effect on capital infrastructure repair and rehabilitation costs: as operations are under-funded, capital needs increase.

Capital-to-operating transfers are both against the original intention of the Trust Fund and inefficient. From an operations point of view, using capital funding often leads to use of more expensive contractors and fewer regular employees. From a budgeting point of view, the true operating cost of the system is obscured by the use of capital funds; fare-setting, legislative appropriations and other policies that should be based on true operating costs get skewed by the practice. Finally the public trust is lost by using Trust Fund monies for other-than-intended purposes. The public is justified in its suspicion that its contributions to the Trust Fund, mainly paid at the pump, are not dedicated to bringing the system to a state of good repair or for expanding it to provide more services.

Part of TRANSIT operations is currently funded with fares and other system-generated revenues such as advertising. Fares are not indexed to inflation, operating expenses, or any other metric, and were in fact frozen for 11 years. As a result, fares have been raised irregularly and somewhat steeply. The cost recovery ratio – ratio of fare and other TRANSIT revenue to operating expenses – will be about 47% when fare increases are implemented in July 2005.

Recommendation: Regularly increase TRANSIT fares to keep pace with expenses.

TRANSIT is preparing to increase its fares in July 2005, and fares should indeed go up as a measured response to increasing needs: TRANSIT's operating costs have been increasingly subsidized with funds intended for capital projects, and as TRANSIT has added services its costs have risen. However the agency should not simply use a one-time fare hike. It should adopt a policy which guarantees fares will increase as expenses increase, and therefore guarantees the Trust Fund capital resources will not be diverted for operating expenses.[18]

No transit system in the United States comes close to supporting 100% of its costs with the farebox, and most fund less than half of their operating cost from fares. Recent fare increases have raised the TRANSIT cost recovery ratio to 47%, so that for every $1.00 it spends to run the trains and buses, it receives 47 cents from fares and other system-generated revenue.[19] With the recommended future steady recovery ratio of about 48%, fare increases should be predictable and based on reasonable

[18] A more thorough recommendation on fares is available from the New Jersey Association of Railroad Passengers in its "Proposal for a Statewide Policy to Fund Public Transportation, A 5 Point Program for an Adequate, Stable and Secure Source of Future Funding," April 2005.

[19] If fares were to remain static for the next 10 years, the share would be reduced to only 39 cents by 2015. The rest of the cost of operations – the other 53 cents per dollar – comes from Federal and State subsidies.

needs, and should keep pace with inflation. Indexing fares to a steady fare box recovery ratio is sound fiscal policy for a transit agency.[20]

The Math of Operating Deficits

Even if a transit agency's operating revenues are increasing at the same rate as expenditures, there can still be negative financial consequences. For example, if in a given year an agency's operating expenses are $200 million and operating revenues are $100 million, then the agency has a 50% fare box recovery ratio and an operating deficit of $100 million. This is a reasonable position for a transit agency; 50% is often considered a target fare box recovery ratio. Let's say that the next year, the operating revenues and expenses both increase by 5%: the operating expenses are now up to $210 million while revenue is only up to $105 million. The fare box recovery ratio is still 50% but the operating deficit is up to $105 million, an increase of $5 million from the year prior. **To avoid these increasing absolute operating deficits, operating revenue needs to grow at twice the rate of operating expenses. That means higher fares**, even when it can be claimed that operating expenses and revenues are "increasing in parallel." When considering how much fares should be raised, it is important to look at absolute numbers as well as rates of change.

Absolute Operating Deficit Grows even as Expenses and Revenues Increase at the Same Rate	Year 1	Growth Rate	Year 2
Expenses	$200	5%	$210
Revenues	$100	5%	$105
Deficit	$100		$105

Other TRANSIT system-generated revenues have been lost over time. Leveraged lease proceeds were tax benefits that TRANSIT sold to investors who took nominal title to property, such as rolling stock, and charged the depreciation against their tax liability. The sale of these tax benefits has been suspended due to federal policy shifts, resulting in a loss of operating revenue of $20 to $30 million per year. After the attacks of September 11, 2001, TRANSIT received a $100 million federal appropriation to fill its operations gap; this funding was for one time only, but the security mandates have required permanently higher levels of operating expenditure and are still in place. Other sources have already been tapped out, including leftover COPs revenue (Certificates of Participation). As TRANSIT officials put it, "We've already cleaned out the cupboards. The cupboards are bare." Both TRANSIT and DOT could not provide regular service – running the

[20] Most of the numbers used here are technically cost recovery ratios since they account for all system generated revenue, not just fares.

trains and buses, maintaining the roads, and picking up snow, for example – without substantial pass-throughs from the Trust Fund-funded capital budgets.

Recommendation: Fully fund DOT and TRANSIT operating budgets and eliminate capital-to-operating transfers.

Capital and operating needs are closely interconnected, a fact not fully acknowledged by framers of Trust Fund Authority legislation. The state's failure to plan and appropriate sufficient, predictable operating resources has created a structural deficit in operating funds. The two budgets need to be planned to function together, not in competition. Capital to operating transfers result in forgone rail expansion; the operating deficit results in less routine road, bridge and rail maintenance, and less frequent bus service.

Without resolving the structural deficit,
the capital budget will continue to appear to under-perform
and the operating side will continue to be starved
and forced to steal from the capital side.

The Blue Ribbon Transportation Commission report did not fully deal with how to end the operating budget's structural deficit. As New Jersey faces overall budget deficits, the General Fund cannot be relied upon as the only source for filling this crucial need. The practice of using capital funds to pay for operations should be stopped immediately, and the increased revenue required up front should be allocated.

The Blue Ribbon Transportation Commission report and others have recommended a weaning approach to resolving the $300 million plus capital-to-operating transfers. Some believe that eliminating the capital-to-operating transfers all at once would be too large a fiscal step to take and should be done in stages. However ending capital-to-operating transfers completely, and soon, is essentially an accounting transfer. While it may tighten the fiscal constraints in the short term by requiring the state to borrow for less of its transportation system and use more pay-as-you-go sources, it provides fiscal solvency in the long term. Without ending this practice and solving the operations deficit, the agencies will continue to use funds intended for new train lines and better roads to pay for day to day operations. Agencies should only resort to using capital money for operations in case of severe fiscal emergency; New Jersey's practice has instead caused one.

3. Leakage of Trust Fund revenue sources into the General Fund

By constitutional dedication, the Trust Fund receives $805 million each year as follows:

- $200 million from petroleum gross receipts tax, a tax that affects fuel wholesalers;
- $200 million from a motor vehicles sales tax; and
- $405 million, or the equivalent of 9 cents of the 10.5 New Jersey state gas tax.

The Trust Fund also has 'statutorily dedicated' revenue sources. These are items which may be appropriated to the Trust Fund, but in times of statewide budget deficit have been appropriated to the General Fund. These funds have not been appropriated to the Trust Fund since 2001. Referred to here as leakage items, they add up to $114.5 million per year and include,

- $30 million from heavy truck fees,
- $24.5 million from the toll road authority, and

- $60 million from the good driver surcharge.[21]

In addition, one and a half cents of the current 10.5 cent gas tax will no longer be obligated to debt service in the near future. The revenue equivalent of the 1.5 cents, or about $67 million, is not constitutionally dedicated to the Trust Fund but is intended for transportation purposes.

Recommendation: Constitutionally dedicate all originally intended resources to the Transportation Trust Fund.

With a projected FY 05 deficit of $3 billion, the state of New Jersey clearly needs all it can get for its General Fund. However these specific sources are guaranteed for transportation purposes. A constitutional dedication of these resources to the Trust Fund would be a clear signal of the state's commitment to restoring financial stability to the transportation system. Such a dedication is also recommended by the Blue Ribbon Transportation Commission and in Assemblyman John Wisniewski and Assemblyman Peter Biondi's proposed Trust Fund reauthorization legislation (A3414, October 2004).

4. Insufficient accountability and independent oversight

One of the main underlying factors behind the current crisis is insufficient oversight of the Trust Fund. A number of questions need to be seriously posed to the Governor, Legislature, TRANSIT and DOT:

- How can the public be assured it is getting the maximum bang for its buck in transportation spending?
- How can DOT and TRANSIT be assured that their planning efforts will be met with stable, sustainable funding into the future?
- How can the taxpayers be assured that the agencies' operating budgets are not in structural deficit?

The system clearly needs added oversight and accountability to instill this kind of assurance. In addition, it needs to be supported by funding sources which will not deplete over time and which are not over-sensitive to recession or inflation.

As it stands now, the Trust Fund Authority is largely powerless. It is comprised of the Commissioner of Transportation, the State Treasurer, and five appointees by the Governor and Legislature. There is no independent accounting arm or balancing oversight measure in place. The Trust Fund Authority, as noted earlier, is not tied into the process of developing or managing the capital programs for which it issues bonds, nor is it part of the management of its resources by the agencies. It is also not part of the management of federal funds, much of which are matching funds unavailable without its resources. The Trust Fund Authority simply bonds out that amount appropriated to it by the State, within legal limits. In the last 10 years, the limits on the amount it can bond and the terms of its bonds have been increased. While the agencies' needs have grown, excessive bonding without independent oversight has led to the current crisis in which all revenue coming into the Trust Fund is obligated to debt for the next 15 years.

[21] The so-called 'good driver surcharge' was originally named in context with a safe driving program and is now part of regular motor vehicle registration.

Recommendation: Create an independent Five Person Financial Policy Review Committee.

The Blue Ribbon Transportation Commission Report and legislation proposed by Assemblymen Wisniewski and Biondi have introduced the idea of establishing an independent five member Financial Policy Review Committee.[22] The Committee would annually certify that the Trust Fund is not being used for unauthorized expenses and that the Trust Fund Authority is not issuing bonds beyond established limits to maintain stability. If certification cannot be made initially, there is an appeal process by which the Transportation Commissioner can work with the Review Committee to come to consensus on the funding plan.

Recommendation: Issue 6 Month Reports from the Director of the Division of Taxation.

As New Jersey state government does not have a strong auditing arm, another layer of accountability would be provided by requiring 6 Month Reports from the Director of the Division of Taxation on how much is collected from motor fuel and other relevant taxes. This certification would be made to the Review Committee. These are excellent recommendations, and this report calls for added measures to promote oversight and accountability.

The five person Financial Policy Review Committee would be politically independent and provide a balance to the governor's office, the Transit Board and Commissioner. The Wisniewski/Biondi bill proposes the committee be appointed by members of the Executive and legislative branches, as follows:

- One appointment by the Governor with the consent of the Senate (4 year term),
- One appointment by the President of the Senate (3 year term),
- One appointment by the Assembly Speaker (3 year term),
- One appointment by the Senate Minority Leader (2 year term), and
- One appointment by the Assembly Minority Leader (2 year term).

This composition is reasonable and should be adopted, but with changes to the members' terms. This report recommends an alternative structure, to ensure the Committee's independence from the political process. Committee members should have **overlapping terms of five years each**. Initially, the five members would be phased: one would get a one year term, one a two year term, one a three year term, one a four year term and one a five year term. As each retires, a new appointee would get a full five year term. In this way, one new member would retire each year and one would be appointed each year. The five year time frame would protect the Committee from becoming overly concerned with elections. It would also allow Committee members enough time to further develop expertise regarding the issues they face.[23]

Appointees to the Committee should have expertise in transportation finance. They should have experience dealing with transportation infrastructure, capital projects, operations, and budgeting, as well as long term financing. Appointees should be professionals who are able to make a five year commitment and lend their full attention to the work of the Committee. No member of the legislature or executive branch should be a candidate for the Committee.

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[22] Assemblyman Wisniewski and Assemblyman Biondi's proposed Bill A 3414 is attached as Appendix D.

[23] The committee structure and the method of phasing in 5 year terms are similar to that used when the Garden State Preservation Trust was established.

The Committee would function similarly to the New York State Financial Control Board established in 1975 to solve New York City's financial crisis. The Financial Control Board is a helpful precedent for the Committee: it provided review and oversight, it required a new level of accountability from the entity in financial trouble (New York City), and it had the power to restrict implementation of any financial plans and borrowings that it did not approve and certify. Similarly, this report recommends establishing a Committee that would review, oversee and hold accountable all relevant parties to ensure the Trust Fund remains solvent and the transportation infrastructure of the state is stably funded.

The Committee would receive proposed operating budgets from the Commissioner in January of each year and capital budgets in March. These budgets will have already been approved by the Governor and the Metropolitan Planning Organizations (MPOs); the Committee would review the budgets while the legislature is doing the same, for about 4 months. Unlike the transportation budgets reviewed by the legislature, however, the Committee would review budget plans that include all resources – federal and state. At the same time, the Director of the Division of Taxation would make reports to the Committee and the public every six months showing the full amount collected from transportation-related taxes and tolls (gas and diesel, petroleum gross receipts, auto sales, contributions from the New Jersey Turnpike Authority, etc.).

With this information in hand, the politically independent Committee would be empowered to certify that the budgets are sustainable and requests are consistent with resources available from the Trust Fund. Certification would be subject to a reasonable appeals process by the Commissioner, as outlined in Wisniewski/Biondi's proposed legislation. If the Committee cannot certify the budgets as they are presented it would have the power to recommend the Commissioner provide a corrective action plan, which would then be subject to Committee approval. If the Committee further finds it cannot certify the corrective action plan, it can withhold Trust Fund revenue from the agencies for that fiscal year.

The Committee would also certify that the Trust Fund Authority itself is only providing resources at a fiscally responsible and sustainable level, given certain restrictions, including these:

Recommendation: Restore long-term bondability to New Jersey's transportation financing system by limiting bond maturities to ten years until permanent fiscal stability is restored.

Start with Short Term Bonds. The Trust Fund Authority should adhere to certain bonding limits, including a limit on issuing longer term bonds, until bond-ability is restored. An initial analysis shows that the Trust Fund Authority can restore bond-ability by using 10 year bonds for the first 5 years, and then switching to 20 year bonds. The principle of starting short-term should be adhered to, however the exact terms should be further analyzed. The Committee would hold the Authority accountable to these restrictions.

Eventual Pay-As-You-Go/Bonding Ratio. Each year, some portion of the capital program should be funded on a pay-as-you-go basis. However, given the increased pay-as-you-go resources necessitated by the initial elimination of capital to operating transfers, a strict ratio need not be established immediately. Trust Fund reauthorization should lay out when it will implement a pay-as-you-go/bonding ratio for the capital programs, and the Committee should certify that the Trust

Fund Authority is following this ratio. Bondability can be established and maintained with a 20/80 pay-as-you-go/bonding ratio is enacted as early as 2016 given complete elimination of the capital to operating transfers. Like bond term limits, the exact number requires further analysis.

Operations are Fully Funded. Capital-to-operating transfers should be eliminated entirely. The Committee should certify that revenue from the gas tax and other sources is being used on a pay-as-you-go basis to fully fund operations before being used by the Trust Fund Authority to back new bonds. The Committee should also certify that the operating budgets are funded entirely with pay-as-you-go resources, and that the Trust Fund Authority is not providing borrowed funds for capital projects that are being used by the agencies for routine operations. The Committee would receive the full operating and capital budget statements, which would help maintain an honest assessment of operating needs. As noted earlier, TRANSIT fare increases would help to close the operating funding gap.

Conclusion

The Transportation Trust Fund is out of cash as of June 30, 2006. This is the case even though millions in gasoline and other dedicated taxes are collected each year. Reforms are necessary to prevent it from happening again. In addition to reform, significant new revenue will be needed to fund the state's transportation system into the future. This should not come solely from the gas tax; the TRANSIT rider should be part of the solution, and agencies will need to scale back their capital programs significantly. While the overall numbers are daunting – a $32 billion gap – the impact on individuals and families need not be overwhelming. The transportation system can in fact be saved with only a modest contribution from each resident, but residents need to demand more for their money: more accountability, better oversight, better planning, transparent budgeting, and guarantees that the Trust Fund will not find itself in this crisis again.

To stop the cycle of 'too many demands; too few resources; insufficient accountability,' this report makes the following six recommendations for reform:

1. **Fully fund DOT and TRANSIT operating budgets and eliminate capital-to-operating transfers.** *See pages 17 to 20.*

2. **Regularly increase TRANSIT fares to keep pace with expenses.** *See pages 18 and 19.*

3. **Constitutionally dedicate all originally intended resources to the Transportation Trust Fund.** *See pages 20 and 21.*

4. **Restore long-term bondability to New Jersey's transportation financing system by limiting bond maturities to ten years until permanent fiscal stability is restored.** *See page 23.*

5. **Create an independent Five Person Financial Policy Review Committee.** *See pages 21 to 23.*

6. **Issue 6 Month Reports from the Director of the Division of Taxation.** *See page 22.*

Acknowledgements
This report was prepared by Regional Plan Association, in cooperation with the AAA Clubs of New Jersey, the Edward J. Bloustein School of Planning and Public Policy and the Alan M. Voorhees Transportation Center at Rutgers University, and Tri-State Transportation Campaign. David Beale from Goldman, Beale Associates served as a consultant on bonding issues.

We thank The Fund for New Jersey, the Schumann Fund for New Jersey, the AAA Clubs of New Jersey and the New Jersey Chapter of the National Association of Industrial and Office Properties for their financial support.

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Appendices

Appendix A	A Transportation-Driven World-Class Economy: New Jersey At Risk
Appendix B	Limited Access Highway Miles, 1924 to Present
Appendix C	New Jersey Transportation Capital Improvement Strategy
Appendix D	Proposed Assembly Transportation Trust Fund Reauthorization Bill A 3414

Rutgers
Regional Report

Issue Paper
Number 23

April 2005

A Transportation-Driven World-Class Economy: New Jersey at Risk

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Published by

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THE STATE UNIVERSITY OF NEW JERSEY
RUTGERS
Campus at New Brunswick

New Jersey's economy has been successfully reinvented several times, and each occasion significantly enhanced the well-being of the state and its people. Most recent is the transformation to a leading-edge, knowledge-driven, information-based economy, which has yielded the highest median household and family incomes among the 50 states. However, it is important to observe that every period of economic progression in New Jersey was built upon earlier investments in transportation infrastructure. Now, as the twenty-first century unfolds, the relationship between economic growth and infrastructure investment is again becoming a major public policy issue as the state confronts an era of diminishing transportation resources.

At the beginning of the twentieth century, New Jersey was positioned at transportation's leading edge. So too was the state's economy, with its manufacturing dominance built directly on the foundation of an advanced railroad infrastructure. As the highway era emerged in America in the 1920s, New Jersey again stood at the forefront of transportation investment, and this provided the initial underpinning for the state's great post–World War II prosperity. The unique postindustrial economic position of New Jersey in the final half of the twentieth century would not have been achieved without a continually enhanced transportation infrastructure.

The same is true in the twenty-first century. Today's successful global economy requires a comprehensive, multimodal, global transportation grid. If New Jersey fails to invest in its component of that transportation grid, it will cease to be a competitive player in the global economy.

Executive Summary

The precondition for every phase of economic advancement in New Jersey was a foundation of leading-edge transportation infrastructure. The post–World War II transportation–economic experience amply demonstrates this reality.

- All of New Jersey's postwar economic and demographic advances were predicated on successive major additions to the state's transportation infrastructure—increments of new transportation capacity that preceded and facilitated subsequent economic growth. There were three distinct waves of net new transportation investment that took place during this era.

- The post–World War II prosperity of the late 1940s and 1950s was based on a pre-war infrastructure in New Jersey that was one of the finest state highway systems in the country. During the 1920s, an innovative and effective coordination between New Jersey's transportation needs and transportation funding was instituted. Subsequently, in the late 1920s and throughout the 1930s, substantial investment was made in the system, and numerous nation-leading highway innovations were instituted, among them the first divided highway and the first cloverleaf interchange.

- This first-wave highway infrastructure was the envy of America. When World War II ended and

This report is part of a larger study of the region's transportation infrastructure and funding needs organized by the Regional Planning Association (RPA) in collaboration with the Alan M. Voorhees Transportation Center of the Edward J. Bloustein School of Planning and Public Policy; Goldman, Beale Associates; the Tri-State Transportation Campaign; and the AAA Auto Clubs of New Jersey. The authors wish to thank RPA and its vice president and New Jersey director, Thomas Dallessio, for their support. All opinions expressed in this report are those of the authors.

the civilian economy began to explode from the war's pent-up demand, this basic system provided the highway capacity and accessibility to accommodate the strong postwar economic growth through 1960.

- As the 1960s commenced, the state highway system exceeded 1,900 miles in length. However, even with substantial upgrading and improvements, it was approaching its capacity limitations. Transportation funding constraints emerged in the late 1940s and became pervasive in the 1950s. These constraints greatly hindered any further major expansion of the system. Capacity shortfalls were about to impact the economy.

- However, the completion during the 1950s of the state's first two toll roads—the New Jersey Turnpike and the Garden State Parkway—provided the second wave of additional transportation investment necessary to sustain robust economic growth. Just as New Jersey had created a nation-leading state highway system prior to World War II, it created a network of nation-leading toll roads in the postwar years. These bold responses—representing more than 300 miles of new carrying capacity—facilitated and supported the economic success of the 1960s, which set job-growth records that still have not been surpassed. The New Jersey economic powerhouse of the time appeared unstoppable. Unfortunately, it was, in fact, derailed.

- The exciting economic and demographic advances of the 1960s, buoyed by the new capacity provided by the state's toll roads, ultimately succumbed to the economically challenged 1970s, which paralleled the lagging pace of transportation improvements during that decade. This was a period when New Jersey's—and the Northeast region's—economic superiority was confronted by a major domestic challenger: a surging Sunbelt capturing increased shares of America's economic and demographic growth.

- The Sunbelt's emerging prosperity was based significantly on the new mobility spawned by the Dwight D. Eisenhower National System of Interstate and Defense Highways. Prior to the Interstate system, the Sunbelt—excluding California—lagged badly in both transportation infrastructure and economic growth.

- However, during the 1960s and 1970s, New Jersey trailed in developing its share of the Interstate system, with numerous missing links inhibiting its transportation effectiveness. The Sunbelt states, recognizing the linkage between transportation and economic growth, greatly accelerated transportation investment. As a result, new patterns of regional connectivity quickly emerged.

- The once unique advanced transportation infrastructure of New Jersey, and the efficient accessibility to major economic markets that it provided, was beginning to be challenged, and in numerous cases surpassed, in many parts of the Sunbelt. By homogenizing transportation costs, the Interstate system created genuine national domestic markets, rendering southern firms much more cost competitive in serving northeastern markets.

- Transportation funding shortfalls throughout the 1970s in New Jersey—worsened by the failure of several transportation bond issues prior to 1979—and the lack of significant new capacity additions, other than some segments of the still incomplete Interstate system, had damaging economic repercussions.

- Still, renewed economic advances were then achieved in the 1980s and 1990s. This shift was based on the new mobility and accessibility generated by the completion of the Interstate Highway System, the third wave of transportation investment. Although the Interstate Highway System was designed in the 1950s, it took until

the early 1990s before it reached its final length of 415 miles in New Jersey. But a system bound for completion bulwarked the strong economy of the 1980s, and the system's final capacity additions were in place just in time to accommodate the major economic expansion of the 1990s.

- In addition to the Interstate system, the third investment wave included the creation of New Jersey Transit (NJ Transit) in 1979, which led to substantial improvements in commuter rail and bus operations as the 1980s advanced. This was pivotal for the resurgence of a number of urban economies in the 1980s and 1990s, as was the institution of select ferry services.

- Thus, there have been three massive capacity-enhancing increments of new transportation infrastructure in New Jersey: (1) the original state highway network initiated in the 1920s and continually improved in the decades that followed; (2) the state's toll roads; and finally, (3) the Interstate system and the revitalization of the state's public transit infrastructure. Each provided the foundations for a successive wave of demographic and economic growth and for major advances in the state's standard of living over the past six decades.

- In addition, based upon the three waves of transportation capacity additions, the reinvention of the state's economy during the second half of the twentieth century was total. A goods-producing economy was transformed into a service-producing society. Moreover, these trends accelerated during the final two decades of the twentieth century! New Jersey stands on the upper rungs of the nation's economic ladder.

- However, two dilemmas now confront New Jersey. Much, if not all, of the new transportation capacity provided by the Interstate system, to say nothing of the two predecessor capacity increments, is essentially used up. No new equivalent-in-scale addition to the state's highway infrastructure is in New Jersey's future as land-use controls, environmental regulation, and constraints on land availability preclude new road projects of the size of the highway investments of the twentieth century. In other words, there will not be an "Interstate System II."

- Instead, what is feasible and necessary is a sustained upgrading of all aspects of the state's transportation infrastructure, with capacity gains secured through new technologies, efficiencies, and connections. The goal of such investments is to improve existing systems so as to reduce congestion-related time and cost increases on businesses, workers, residents, and governments that result from transportation constraints. Such increases have the potential to significantly damage the state's economy and reduce its rate of growth of income, jobs, and private investment.

- The second dilemma is that, with another transportation funding crisis now upon the state, New Jersey faces a 1970s redux when economic growth lagged, employment increases slowed, and other regions of the country surged ahead on the strength of transportation infrastructure advantages. Will New Jersey's future revisit the past when, in the absence of appropriate investment in transportation, the state suffered economically? Or will the political courage emerge, as it has before, to craft appropriate policy solutions? No less than the state's economic future hangs in the balance. New Jersey must take the high road in making effective and immediate decisions to provide the transportation investments required to maintain the quality of its residents' lives and enhance their ability to work in a world economy where success is ever more dependent on access, speed, and movement.

A Transportation-Driven Economy

There are strong linkages between accessibility, efficient transportation systems, economic advancement, and standard of living. Throughout most of the twentieth century, New Jersey had a nation-leading, highly competitive transportation system—and a nation-leading economy built upon and supported by that transportation system. However, the causal linkage between the two was not fully appreciated, and New Jersey's strong economy was taken for granted. Now, as the twenty-first century unfolds, the importance of this linkage is again coming to the fore.

With accelerated and sustained technological innovation, the penetration of the Internet into all aspects of business, and the full emergence of a knowledge-based information-age economy, conventional wisdom expected the pressures on basic transportation systems to ease. In actuality, the new knowledge-based economy is more dependent on efficient transportation than in the past. For example, the movement of information in huge quantities and at incredible speeds by fiber-optic cable was supposed to significantly reduce the movement of people and goods. Instead, it has generated a need for even more mobility and increased transportation demand.[1]

Telecommuting, expected to grow because of the increased ability to work effectively at a distance, has been minimal to date and is likely to remain only a niche sector of the overall economy. The new economy is housed in office buildings, founded on instant communication and close interaction among its workers. Offices have become the factory floors of the new economy, where an increasing share of the nation's output is produced. A key priority of transportation systems is to facilitate the movement of knowledge-based workers to their office workplaces. Knowledge-based industries will be the major growth sectors of the economy—assuming that there is sufficient and efficient commutation capacity.

A harsh corporate discipline of cost minimization, necessitated by unrelenting global competition, has developed and is certain to characterize the decades ahead. Comprehensive logistical systems are increasingly critical to this cost discipline and future economic growth and quality of life. Efficient supply-chain management places enormous demands on transportation systems. Just-in-time inventory control in manufacturing and retailing led to new advances in corporate efficiency, significant productivity improvements, and resulting cost savings, but at the same time required, for its effectiveness, large increases in the volume of truck shipments and deliveries. Information technology now makes it possible to specify optimum daily inventory levels in both the production and consumption sides of markets through strict cost efficiency criteria. But the actual adjustment of those inventories requires many more deliveries of smaller quantities of product on a much more frequent basis than in the past.

This direct relation between knowledge and movement applies not only to manufacturing but to every service-providing sector of the economy. Parcel services deliver not only real copies of critical documents but the full range of computer, software, and office equipment and supplies—critical inputs for the new postindustrial "factory floors"—on a just-in-time basis. Cost-efficient Internet shopping, both consumer and business driven, is capturing an increasing share of sales and likewise generates additional increases in delivery-service traffic. Every increment of economic advancement demands an equivalent increment of transportation services advancement. These are just a few of the new

[1] Other fundamental shifts in the economy based on technological changes led to similarly unexpected results compared to initial predictions. The promise of computerization was supposed to create the paperless office. But reality turned out quite differently. Instead, paper consumption has soared to new record levels!

transportation stresses and demands that are emerging as the economy sprints ahead.

The bottom line is that a global economy requires a comprehensive global transportation grid. If New Jersey is not an efficient component of that transportation grid, the state cannot continue to be a competitive component of the global economy. New Jersey is confronting a major crisis in transportation funding; thus, it is important to stress the scale of the bleak economic consequences that can result from a faltering transportation system. This first section of the report provides a historical perspective on transportation's effect on economic well-being and economic advancement.

A Historical Perspective

Transportation technology was one of the earliest priorities for human development, coming before agriculture and probably right after weapons. The ability to move people, supplies, and materials became the key to human and economic growth and fundamentally shaped the distribution and location of entire populations. Early overland trade routes, stretching across continents and using animal power—horses, oxen, camels, mules—connected vastly different societies and permitted the growth of commerce and the development of centers of population and economic activity. Water transportation especially, from human-powered canoes, rafts, and other vessels, to ships with fixed sails, and then to ships that could sail against the wind, enabled the economic development of maritime nations throughout the world. Natural harbors, estuaries, and rivers into the interior defined the location of cities and connected hinterland sources of raw materials and natural products to markets and trade. Road building for various types of vehicles such as coaches, carriages, wagons, and carts pulled by horses and other animals provided linkages between water-based cities and trading centers. Canal building and barge transportation, still using animal power, advanced the opening of new areas for commercial development and settlement, establishing further connections to natural water bodies and population centers. Canals offered cheap and highly efficient transportation that could reliably move large amounts of material relative to hauling such cargo overland on roads that were all too frequently subject to deterioration and damage.

Then, beginning in the early-nineteenth century, and with an increasing rapidity of change in technology, the development of mechanically powered transportation modes had profound effects on the location of people and the rate and scale of economic growth. In Europe and America, the steamship, the railroad, coal-fired ocean-going ships, and the motor vehicle led to ever more economically efficient means of transportation. With these inventions came the ability to transport goods, raw materials, and people in ever-larger numbers much more cheaply and rapidly than the animal-dependent roads and canals and the wind-driven sailing ships that had for centuries been the dominant transportation technologies. The development of powered flight, and in its current evolution, the jet engine, provided even further economies in the time and costs of transporting people and some types of cargo. A brief review of these increasingly sophisticated and efficient modes of transportation technologies is useful.

Fixed, smooth, standardized metal rails with steam-driven locomotives transformed the development of the United States and offered vast areas of the country efficient connections to markets, cities, and major water transportation sources. The railroads also linked the nation's cities and enhanced the capacity of urban areas to offer even further economies of scale with the ensuing additional concentration of commerce, industry, and population. But railroads, even in their electrified form, gradually (though not completely) lost their cost advantages to motor vehicles for the transportation of people. They retained some cost advantages for the movement of freight, although they have been surpassed in terms

of efficiency by trucks for the movement of many types of goods and materials.

Ships driven by coal-fired engines, first by the iron-screw propeller and then by steam turbine and diesel engines, grew in size and complexity and are now able to carry enormous tonnages of material in standardized containers. The growth of ports connected to railroads and highways led to ever-larger volumes of international trade in goods and materials and in the flow of people. Until supplanted by the airplane, the cruise liner had its run of transportation dominance in moving wealthy people across oceans in elegant fashion as well as transporting large numbers of people in the cramped confines of steerage class. Today's vast fleet of super-sized oil tankers ply the world's oceans distributing oil to fuel the cars, trucks, planes, and other ships that, in turn, move the cargoes of the world's economies and their peoples.

The internal gasoline-fired combustion engine changed the world in a manner unlike any other transportation technology. It provided access to cheap, rapid, individual transportation for millions of people. It spawned vast and increasingly sophisticated hard-surfaced highway, bridge, and tunnel networks to replace the unpaved, rutted roads of horse- and animal-powered transportation. It affected how people live and defined prevailing culture; it led to the dispersal and deconcentration of housing and businesses; it profoundly changed land-use patterns; and it permitted new locations for economically viable business growth. Truck transportation emerged as the dominant, efficient mode of moving most goods and materials. The motor vehicle also imposed enormous costs in terms of lives lost, injuries, congestion, and air pollution damages on the very same populations that so eagerly and enthusiastically embraced the speed, low cost, instant accessibility, and personal freedom it provided.

The prevailing historical pattern has been that new transportation technologies emerge, compete, complement, and replace older ones because of cost and scale advantages. These new technologies dramatically affect the location of economic and human activity and determine how we live and how well we live. Because these technologies so deeply affect human welfare and our economy, they are highly appropriate subjects for public policy. Ensuring the efficient movement of people and goods, and doing so in ways that support economic growth and human well-being while simultaneously avoiding the damaging effects to both that result from poorly operating transportation systems, is a formidable responsibility of all levels of government.

New Jersey Transportation: The Early Period

The economic imperatives of New Jersey's location have provided powerful, although changing, advantages throughout the years. Positioned on the Atlantic Ocean with deep-water access ports, bounded by the large and navigable Hudson and Delaware Rivers, and located between New York and Philadelphia, New Jersey has benefited enormously because of its geography, its ready access to markets and people, and the mobility bestowed on it by its transportation systems. This was true when it was a colony, dependent on ships and ports and rudimentary roads. It was true when it was a fledgling state in the new American Republic with its expanding agricultural and trading economy supported by road improvements, steamboats, canals, and early railroad connections. It was true in the post–Civil War era when industrialization and manufacturing became dominant, and population and urbanization grew rapidly based on numerous railroads with their links to and within the state's cities, to the state's ports, and to New York City. It was true in the late-nineteenth and early-twentieth centuries with hints of suburbanization developing along the state's extensive rail lines. Suburbanization accelerated and became the dominant spatial and economic dynamic in the second half of the century as state highways, toll roads, and the Interstate system centrifugally dispersed people and businesses in the new service-oriented, knowledge-based, information-dependent economy.

Road and bridge improvements in New Jersey in the late-eighteenth and early-nineteenth centuries

linked the state's towns and ports and also increased the efficiency of transportation to New York and Philadelphia. Private toll roads, known as turnpikes, grew in number, quality, and mileage, and along with improvements in wagons and carriages reduced travel times needed while increasing the amount of agricultural products, raw materials, and finished goods moving to ports for shipment abroad and to other states. Nevertheless, it was the development of canals and railroads that led to the major economic advances of New Jersey in the nineteenth century. The Morris Canal, completed in 1831, connected Phillipsburg on the Delaware River to Newark, and then subsequently to Jersey City on the Hudson River, using a complex lock-and-plane system that covered a 1,674-foot change in elevation across its 102 miles. It was a major engineering accomplishment, and the large and sustained volume of traffic it carried on animal-drawn and steam-powered barges of coal, iron, timber, and various agricultural products was a boon to the villages, towns, and cities throughout the entire region it traversed.

The Delaware and Raritan Canal, conceived and built in the same period, connected Bordentown on the Delaware River with New Brunswick on the headwaters of Raritan Bay. Completed in 1834 and covering 44 miles with 14 locks, it became a major route for coal and agricultural products. Pennsylvania coal, transported on New Jersey canals, fueled the growing need for heating, ship power, and steam transportation in the country and beyond. It also provided the essential fuel for New Jersey's rapidly expanding manufacturing sector. Traffic on both canals peaked in the 1860s, with the volume on each canal frequently exceeding the tonnage on the longer and more famous Erie Canal in New York.

However, as railroads in New Jersey proliferated and offered faster and cheaper transportation of heavy materials, the economic viability of canals declined. Although both of New Jersey's major canals remained in commercial operation into the 1920s and 1930s, railroads rapidly became the dominant mode of commercial and passenger traffic in the years after the Civil War. By the end of the nineteenth century, a large number of railroads densely connected New Jersey's cities and towns. The electrification of some rail lines provided trolley service within cities and to adjacent developing towns.

The railroads supported New Jersey's rapidly growing manufacturing economy and provided the extensive, low-cost links for raw materials and finished goods to flow into and from the region and its ports to the rest of the country and the world. Railroads connected the extensive ferry routes from Jersey City and other locations along the Hudson River to New York City. They provided efficient and large-capacity access for New Jersey residents to the expanding and increasingly well-paid financial and professional-sector job base of the City. This transportation infrastructure became the foundation for the development and attractiveness of high-income New Jersey suburbs.

But just as the railroads replaced the canals as the state's dominant transportation mode after the Civil War, they increasingly faced relentless competition from cars and trucks for both passenger and freight traffic in the middle decades of the twentieth century. The focus of transportation shifted from private rail lines to the public construction of highways, bridges, and tunnels, and their connection to the state's towns, cities, ports, and airports.

Throughout all the profound changes in the state's economy, from its agrarian beginnings to the post–Civil War dominance of manufacturing and then to the service-based information economy of the late-twentieth century, the precondition for success at each stage was the support of an effective and efficient transportation system. Transportation was, and remains, the key requirement to rapidly, securely, and cheaply moving agricultural products, manufactured goods, raw materials, and basic fuels—coal and then petroleum—and ultimately, and above all, the workforce that produces everything.

Table 1
Employment Growth in New Jersey

Decade Employment Change

Period	Employment Change	
	Number	Percentage
1940–1950	342,800	26.1
1950–1960	360,000	21.7
1960–1970	589,100	29.2
1970–1980	454,100	17.4
1980–1990	574,800	18.8
1990–2000	359,400	9.9

New Jersey's Record Expansions

Period	Employment Change
February 1961–April 1970	615,000
April 1982–March 1989	622,000
May 1992–December 2000	578,000

Source: New Jersey Department of Labor.

The Post–World War II Transportation–Economic Experience

All of New Jersey's economic and demographic advances of the post-World War II period were predicated on successive major additions to the state's transportation infrastructure—increments of new transportation capacity that preceded and enabled subsequent economic growth. The post–World War II prosperity of the 1940s and 1950s was based on a pre-war infrastructure that was one of the finest state highway systems in the country. The economy and demography of the 1960s was then buoyed by new capacity provided by the state's toll roads. However, it is important to note that process works in reverse, and the lagging economy of the 1970s paralleled the lagging pace of transportation capacity additions and improvements in that decade. Then, the economic advances of the 1980s and 1990s rested upon the new mobility spawned by the completion of the Interstate Highway System. Thus, there have been three massive capacity-enhancing increments of new transportation infrastructure. They, in turn, provided the foundations for each wave of demographic and economic growth—and for the major advances in the state's standard of living—over the last half-century.

Era 1: The Immediate Postwar Years—Prosperity Reigned

In 1917, the New Jersey Legislature created the State Highway Department and designated 15 routes as the state's highway system.[2] Although renumbered and constantly improved, these routes—such as US 1&9, US 46, US 130, and US 206—still form the skeletal backbone of today's state highway network. In 1926, the State Senate requested a more comprehensive system, and a means of funding it, to cope with growing highway problems. The result, at the time, was the innovative and effective coordination between New Jersey's transportation needs and transportation funding.

[2] This history draws heavily upon a New Jersey Department of Transportation report, *People—The Transportation Connection* (October 2001).

Subsequently, in the late 1920s and 1930s, substantial investment was made in the system, and numerous nation-leading highway innovations were instituted, such as the first divided highway and the first cloverleaf interchange. Signature projects of this era include the Pulaski Skyway (US Route 1&9) and the Edison Bridge. The Skyway—a designated civil engineering landmark, completed in 1932, was a limited-access elevated freeway directly linking the cities of Newark and Jersey City. The Edison Bridge (US Route 9) across the Raritan River was the longest and highest span of its type in the United States when completed in 1939.

The advanced highway infrastructure put in place during this period was the envy of America. When World War II ended, and the civilian economy began to explode from the war's pent-up demand, New Jersey's highway system provided the capacity and accessibility to accommodate the growth that would come. Between 1940 and 1960, the state's economy expanded by nearly 703,000 jobs, or by more than 50 percent (table 1). The state highway system provided the mobility and access for this large increase in workforce and population.

Era 2: The 1960s and 1970s—Decades of Contrast

As the 1960s commenced, the state highway system exceeded 1,900 miles in length. However, even with substantial upgrading and improvements, it was approaching its capacity limitations. The period of strong postwar economic growth through 1960 had been sustained principally on this network. But transportation funding constraints that emerged in the late 1940s were pervasive by the 1950s and greatly hindered further major expansion of the system. Capacity shortfalls and constraints were about to impact the economy. Still, completion of the state's first two toll roads during the 1950s provided the significant transportation increment necessary to accommodate the robust economic growth that would occur during the decade of the 1960s. Just as New Jersey had created a nation-leading state highway system prior to World War II, it created a network of nation-leading toll roads in the postwar years.

Construction of what is now known as the Garden State Parkway began in 1947. It was planned by the State Highway Department as the State Route 4 Parkway. Because of funding constraints, however, only 19 miles had been completed by 1952. The State Legislature ultimately created the New Jersey Highway Authority to finish the route's construction as a toll road and then to operate and maintain it. The Parkway's entire 164-mile length opened in 1955, an impressive increase from the 19 miles operational only three years earlier.

Similarly, the New Jersey Turnpike, with its original section fully completed in 1952, was initially planned as a state-long Route 100 superhighway, acknowledging that Routes 1 and 1&9 would not be able to accommodate projected economic growth. Again, funding constraints necessitated the reliance on a toll road 142 miles in length. This was another New Jersey first: the largest bond issue at the time—$225 million—to build a toll road.

These bold responses—representing more than 300 miles of new carrying capacity—facilitated and supported the economic success of the "roaring 60s," which set new economic records that still have not been surpassed.[3] Driving the state's record-long 110-month economic expansion between 1961 and 1970 were an accelerating service sector, sustained growth in manufacturing, rapid suburbanization from New York City and Philadelphia, and a potent boost from Vietnam War spending. Employment increased by 29.2 percent, or 589,100 jobs, during the 1960–1970 decade, and by 615,000 jobs during the 1961–1970

[3] While the total toll-road mileage length is only about 16 percent of the more than 1,900 miles of the state highway system, the toll roads' strategic location in critical, demand-stressed, transportation corridors and their multiple-lane configurations render their overall impact much greater than their length alone. In fact, their total *lane* mileage represents a much higher proportion of the lane mileage of the state highway system, where there still are a number of two-lane roadways.

expansion (table 1). The New Jersey economic powerhouse of the time appeared unstoppable.

Unfortunately, it was, in fact, derailed. The boom of the 1960s ultimately succumbed to the "troubled 1970s." This was a decade when New Jersey's—and the Northeast Region's—economic superiority was confronted by a major domestic challenger: a surging Sunbelt capturing increased shares of America's economic and demographic growth.

The Sunbelt's emerging prosperity was based significantly on the new mobility provided by the Interstate system (the Dwight D. Eisenhower National System of Interstate and Defense Highways). Prior to the Interstate system, the Sunbelt—excluding California—lagged badly in both transportation infrastructure and economic growth. During the 1960s and 1970s, New Jersey trailed in developing its share of the Interstate system, with numerous missing links inhibiting its transportation effectiveness. The Sunbelt states, however, recognized the linkage between transportation and economic growth and forged ahead. As a result, new patterns of regional connectivity quickly emerged. The once unique advanced transportation infrastructure of New Jersey, and the efficient accessibility to major economic markets that it provided, was beginning to be challenged, and in numerous cases surpassed, in many parts of the Sunbelt. By homogenizing transportation costs, the Interstate system created genuine national domestic markets, rendering southern firms much more cost competitive in serving northeastern markets.

Transportation funding shortfalls throughout the 1970s in New Jersey—worsened by the failure of several transportation bond issues prior to 1979—and the lack of significant new capacity additions outside of some incomplete Interstate segments, had significant and damaging economic repercussions. The state's employment gain in the 1970s slipped to 454,000 jobs, nearly 25 percent below that of the 1960s, and the decade's employment growth rate plummeted to 17.4 percent from the 29.2 percent of the previous decade. At the same time, the newer competitive transportation infrastructure in the Sunbelt was instrumental in its emerging economic prosperity.

Era 3: The 1980s and 1990s—Two Great Booms

Although the Interstate Highway System was designed in the 1950s, it was actually the early 1990s before it was completed in New Jersey. Stretching more than 415 miles in length in the state, its major components today include Routes I-78, I-80, I-95, I-195, I-280, I-287, and I-295. Its first substantial impact on the economy was realized during the 1982–1989 economic expansion, which set a new record employment gain (622,000 jobs). The basic transportation framework of this expansion was the new mobility and accessibility provided by an Interstate system bound for completion. And the system's final capacity additions were in place just in time to accommodate the economic growth (578,000 jobs) of the subsequent 1992–2000 expansion (table 1).

The signature spatial force of these two expansions was the growth of commercial office space accessed primarily by the completed—or nearly completed—Interstate system. It was the 1976 opening of the new AT&T world headquarters along I-287 in Basking Ridge that legitimized new market locations and set the stage for the following decade, when the great 1980s office-building boom dramatically reshaped the regional economic landscape. In 1980, New Jersey was a non-player in the regional office market, but by 1990 the 11-county northern and central New Jersey region emerged as the fifth largest metropolitan office market in the country! Eighty percent of all the rental office space ever built in the state's history went up during the 1980s, much of it in growth corridors defined by the Interstate system. And New Jersey's lofty status as the fifth largest office market in the United States was maintained during the boom years of the 1990s.

In 1980, northern and central New Jersey had 25 million square feet of commercial rental office space. By 2000, this had exploded to 170 million square

Table 2
Sector Employment 2003, Percentage Distribution, and New Jersey Share of the Nation

	Employment Distribution		NJ Share
	NJ	U.S.	of U.S.
Total	**100.0%**	**100.0%**	**3.1%**
Educational and Health Services	13.5	12.8	3.3
Professional and Business Services	14.4	12.3	3.6
Trade, Transportation, and Utilities	22.1	19.5	3.5
Financial Activities	7.0	6.1	3.5
Leisure and Hospitality	8.1	9.3	2.6
Government	15.7	16.6	2.9
Other Services	3.8	4.2	2.8
Construction	4.0	5.2	2.4
Natural Resources and Mining	0.0	0.4	0.3
Information	2.6	2.5	3.2
Manufacturing	8.8	11.2	2.4

Source: New Jersey Department of Labor; U.S. Department of Labor, Bureau of Labor Statistics.

feet—a near-sevenfold increase in one generation—representing a massive ratcheting up of office-development intensity. As is now well recognized, the new information-age economy in New Jersey is principally housed in office buildings. Offices are the factory floors of the new economy, where an increasing share of the state's economic output is produced. In the absence of the Interstate system, New Jersey's office market would never have attained its current scale or high-profile status. Nor would the economy have been able to transform itself.

In addition to the Interstate system, the creation of NJ Transit in 1979 led to substantial improvements in commuter rail and bus operations as the 1980s advanced. This was pivotal for office development in urban areas such as Newark and along the Hudson River waterfront. Moreover, the creation of Hudson River ferry service was also instrumental in the waterfront's success. In the absence of commuter service improvements and new ferry systems, office development would have been far less successful in such urban markets.

The Great Economic Transformation

Service employment is the broad benchmark of the new information-age economy. While this transformation began in earnest during the 1961–1970 expansion, it accelerated sharply during the past two decades. The state gained 615,000 private service-

producing jobs during the 1982–1989 boom, an increment far greater than the *total* employment increase of any decade in history. This was followed by 566,000 additional private-sector service jobs added in the 1992–2000 expansion. The nearly 1.2 million service jobs gained during the two booms represented the full transformation of New Jersey from an industrial manufacturing economy to a postindustrial, knowledge-based, information-age economy. In 1950, manufacturing accounted for 45.6 percent of the state's jobs, while private services accounted for 38.7 percent. By 2000, only 11.6 percent of the state's employment base was in manufacturing, while 69.7 percent was in private services. There are now more than 2.9 million service jobs in New Jersey compared to fewer than 345,000 in manufacturing.

Table 3
Total Personal Income
New Jersey and the United States
1970 to 2003

	New Jersey Share of Total National Personal Income	Ratio: Per Capita Income, New Jersey to Nation
1970	4.2%	1.18
1980	3.8	1.16
1990	3.9	1.26
2000	3.8	1.27
2003	3.8	1.28

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Compared to the nation as a whole, the state has significant employment concentrations (i.e., higher proportional shares than elsewhere in the nation) in professional and business services; financial activities; education and health services; information; and trade, transportation and utilities (table 2). Underrepresented sectors in the state include leisure and hospitality, government services (due to lower relative federal employment in New Jersey), and manufacturing. This employment profile is consistent with the state's high-ranking national office market (fifth largest), its high-ranking warehouse/logistics/distribution market (third largest), and its high-ranking consumer market (highest median household/family income among the 50 states).

Grounded on three eras of transportation capacity additions, the reinvention of the state's economy during the second half of the twentieth century was total and complete. A goods-producing economy was transformed into a service-producing society. Moreover, these trends accelerated during the final two decades of the twentieth century! As a result, New Jersey has been a major economic "winner." Obviously, transformations of the scale that have taken place in the state have inevitably produced significant casualties—particularly former manufacturing workers—as general prosperity has increased substantially. While no single measure can capture the "bottom line," relative income is a useful barometer. Total personal income gauges broad economic market strength, while per capita personal income measures individual economic capacity and the scale of personal spending power.

The ratio of New Jersey's per capita personal income to that of the nation captures the relative economic performance of the state during the post-1970 transition. Between 1970 and 1980, when transportation investment and the economy lagged in New Jersey (while both boomed in the Sunbelt), the state's per capita income fell from being 18 percent

higher than that of the nation to 16 percent higher, indicating a decline in New Jersey's relative economic position (table 3). The service sector failed to expand fast enough to fully compensate for manufacturing income losses. But as transportation investment, office building, and the service economy soared during the 1980s and 1990s, this income ratio improved dramatically, to 1.26 in 1990 to 1.27 in 2000 and to 1.28 in 2003. Thus, per capita income in New Jersey grew from being 16 percent higher than that of the nation in 1980 to 28 percent higher by 2003.

Moreover, this higher relative per capita income performance has enabled the state to maintain an approximate 3.8 percent share of total national personal income since 1980.[4] Because New Jersey now has only 3.1 percent of the nation's population, a share that has been consistently declining during the past three decades, maintaining the state's income share over the past two decades is a remarkable achievement.

Public Transportation Infrastructure, Service, and Economic Development

Commuter and freight transportation investment/disinvestment also have had significant ramifications for the state and regional economy. Historically, while New Jersey did not have comprehensive *systems*, it did have a *set* of the finest rail and bus services in the nation, with numerous private companies comprehensively serving most of the state and providing reliable and ready access to New York City and Philadelphia. In the first half of the twentieth century, there were two unique features of the New Jersey economy. First, the state served as one of the key epicenters of the nation's manufacturing/industrial economy—the largest in the world. The state's preeminent national role was predicated on the unique concentrations of rail-freight accessibility, which was subsequently supplemented by early highway development. In turn, the enormous rail yards along the Hudson River in New Jersey—along with comprehensive freight lighterage systems—underpinned New York's once-powerful manufacturing sector by providing the means to distribute its products throughout the nation.

Second, New Jersey was, and still is, home to a unique concentration of commuter-driven affluent bedroom communities. The early private rail, ferry, and bus commuter lines to New York City and Philadelphia underpinned the development of some of the strongest residential markets in the nation. This infrastructure afforded New Jersey residents access to among the highest-paying jobs in the nation, bolstering personal income in the state and creating powerful consumer markets. Similarly, the commuter transportation services provided the economies of New York City and Philadelphia a potent workforce from New Jersey, the absence of which would have substantially limited their economic growth potential.

By the 1960s, money-losing private rail and bus commuter lines began to deteriorate. In 1966, a multimodal New Jersey Department of Transportation (NJDOT) supplanted the New Jersey Highway Department. Under its auspices,

[4] Areas of high population growth can have high rates of total personal income growth while showing little change in per capita personal income; i.e., income growth can be solely a function of population growth. In the case of New Jersey, the increase in absolute total income, and the maintenance of national share of income, is made more difficult by the state's lower population growth. Therefore, growth must rely more on increases in per capita income.

a Commuter Operating Agency was created to oversee public transit. It distributed subsidies to private rail and bus carriers to support commuter services. But these services, particularly to New York City, deteriorated throughout the 1970s due both to significant funding constraints (three transportation bond issues had failed between 1967 and 1979) and the bankruptcy of the private railroads serving the state and region. This deterioration made New York City a much less desirable place to work and contributed to its sagging economy. Between 1969 and 1979, New York City lost 519,000 jobs, almost 14 percent of its employment base.

NJ Transit, an independent arm of the New Jersey Department of Transportation (NJDOT), was created in 1979 to confront the deteriorated state of bus and rail commuter systems and to take over the bankrupt rail services. Its goal was not only to repair and expand existing services but to forge a seamless transit system from disconnected private bus and rail companies built a century earlier. In addition, voters approved a transportation bond issue in 1979 that included resources for transit rehabilitation. Both events initiated the long process of transit revitalization. The subsequent passage of the Transportation Trust Fund in 1984 provided further funding just as the bond issue's resources were depleted.

NJ Transit's improved service certainly contributed to New York City's economic upswings of the 1980s and 1990s. Reversing the sharp decline of the 1970s, New York City added 263,000 jobs in the 1982–1989 economic expansion and 441,000 jobs in the expansion between 1992 and 2000. These were primarily knowledge-based service jobs located in a revitalized Manhattan office market that thrived during both growth periods.

This improved accessibility to New York City's jobs also fed back into New Jersey's residential real estate markets. The opening of Midtown Direct service in 1996 provides a case example of the economic effects of transportation investment. Midtown Direct, one of NJ Transit's largest capital investment projects, provided rail linkages via the former "Kearny Connection," enabling trains on the Morris & Essex Line to directly access the Northeast Corridor and to proceed to Pennsylvania Station in Manhattan without transferring. Previously, all trains on the Morris & Essex Line terminated in Hoboken, where midtown commuters would have to transfer to PATH. This produced much easier and shorter commutes for large numbers of commuters and communities.

It also produced higher real estate value increases in those communities having direct access to this new service.[5] The extraordinary positive economic impact of public rail accessibility in the closing period of the twentieth century replicated that of private rail service in the early period of the century—higher property values in the affected suburban communities.

Moreover, the impact of Midtown Direct service following the sustained upgrading of NJ Transit helped shift the location advantage in New York City to midtown Manhattan.[6] The parallel upgrading of New York's Metropolitan Transportation Authority's suburban commuter rail service also contributed to accessibility improvements to Midtown and reinforced this new economic advantage. Even before 9/11, rents and occupancy levels in the Midtown office market far exceeded those of lower Manhattan.

Planning is currently under way for the construction of a new commuter rail tunnel under the

[5] Juliette Dellecker Michaelson, "Walk-and-Ride: How MidTOWN DIRECT Has Affected Residential Property Values within Walking Distance of Train Stations" (Master's thesis, Columbia University, May 2004).

[6] Ridership on NJ Transit trains to Manhattan increased by more than 50 percent between 1992 and 2000, while PATH ridership increased by 35 percent. And most of the new jobs added in Manhattan in the 1980s and 1990s were filled by commuters, not by Manhattan residents. *See* Rosemary Scanlon and Edward S. Seeley, Jr., *At Capacity: The Need for More Rail Access to the Manhattan CBD* (New York University, Rudin Center for Transportation Policy & Management, November 2004).

Hudson River connecting to a new passenger train station at 34th Street in Midtown. The tunnel and station are seen as pivotal to the economic future of New York City. Economic expansion and employment growth have become constrained by transportation infrastructure capacity. NJ Transit services to Penn Station have recently been increased significantly, and the daily volume of riders, now at more than 40,000 commuters, is near capacity. The rail tracks to Penn Station date from the early years of the twentieth century, and there is no ability to accommodate additional train traffic.

New Jersey residents hold an estimated 75 percent of all new jobs in Manhattan. Further employment growth in the City is dependent on increasing access across the Hudson River. Although total employment in New York City remains over 200,000 jobs below the most recent peak in 2000, development on the West Side and redevelopment in Midtown require additional commuter capacity. The proposed rail tunnel and station would also significantly reduce car and bus traffic across the Hudson River, alleviating the congestion that routinely chokes Midtown and the vehicle crossings over and under the Hudson. These traffic jams impose significant and rising costs on commuters and businesses and damages to the competitive position of the region.

The proposed new rail tunnel and rail station are examples of the type of large increment to transportation capacity that could significantly benefit the economy on both sides of the Hudson River. The project, of course, would have to compete for funding with other similarly large transportation infrastructure proposals, but it demonstrates the close linkages between mobility, access, and economic success. The existing passenger rail infrastructure—Pennsylvania Station and its track lines—is now nearly 100 years old. The regional economy has changed several times and grown by several magnitudes since the infrastructure was constructed. Proponents of the project argue it is now time to enable the regional economy to continue to change and expand. The new, additional transportation infrastructure would allow workers to access jobs and employers to access workers in a more cost-efficient manner.

Warehouse, Distribution, and Logistics

Another powerful indication of the linkage between transportation and economic advantage is the state's unique role in logistics and distribution. New Jersey is the third largest commercial industrial warehouse center in America, trailing only Los Angeles and Chicago. The state has more than 750 million square feet of warehouse space predicated on a series of transportation/goods-movement assets: Port Newark, the Elizabeth-Port Authority Marine Terminal, Newark Liberty International Airport, the New Jersey Turnpike, the Interstate system, the state highway network, and extensive freight rail facilities. Distinct economic submarkets are port-driven distribution sectors, regional (New York metro) and superregional (Boston to Washington) functions, and Manhattan/New York City-serving sectors.

The economic linkage extends even further than warehousing. Because of the state's dominant East Coast position in warehousing/distribution and efficient access to international air travel, New Jersey has become the site of U.S.-based headquarters of foreign corporations that heavily utilize New Jersey's ports and logistical system. Thus, the state's white-collar service sector also reaps benefits from the transportation assets that make New Jersey so attractive to foreign distributors and their headquarters management functions.

Port Investment and Economic Development

The economic impact of transportation-dependent warehousing/distribution functions has been bolstered by the recent resurgence in ship traffic to New Jersey's ports. In relative decline through most of the post–World War II period, marine traffic started to experience explosive growth as the twentieth century came to a close. Trade through New Jersey's ports, once increasingly challenged by other North American seaports, grew at twice the

national average since 1998. This resurgence reflected a change in global shipping and the emergence of China as the global factory floor. New super-sized "warehouse" ships now sail directly from Asia and provide "all water" route services to the East Coast. This increasingly is replacing the "land bridge," although not yet surpassing it, where goods are unloaded on the West Coast and transported to the New Jersey–New York region by rail.

This renaissance, however, will continue only if based on sustained investment by The Port Authority of New York and New Jersey and the Army Corps of Engineers. Capacity constraints—including the lack of deep channels to accommodate the new generation of freighters—have the potential to abort future growth. Considerable waterfront-investment projects, rail yard expansions, new warehouses/distribution centers, and the largest and most expensive harbor-dredging projects in the nation's history are currently under way.[7] The economic benefits of the shipping resurgence have been substantial to date. Longshoremen jobs, long in decline, have started to grow again, and employment in port services, transportation, warehousing, and marine insurance and banking has increased. But continued port investment will be required to increase capacity to meet demand, or that demand—and its economic and employment benefits—will migrate to more visionary East Coast competitors.

Ferry Service and Economic Growth

Until the opening of service of the Hudson and Manhattan "Tubes" in 1908 and the Pennsylvania Railroad tunnel under the Hudson River in 1910, ferry service provided public transportation links between New Jersey and New York. But by the early 1970s, as bridges and tunnels were built and rail service declined, ferry service between New Jersey completely disappeared. In 1986, privately owned NY Waterway began ferry service between Weehawken and midtown Manhattan. The system then expanded in tandem with the development of "Wall Street West" and the "Hudson River Gold Coast," typified by the new office towers along the New Jersey side of the Hudson River. This development would have been much more limited in scale and location without the provision of ferry service.[8] Today, because of the scale of development along the "Gold Coast," Hudson County is the largest Class A office market in New Jersey, surpassing Morris and Bergen Counties. And Jersey City now has more office space than downtown Pittsburgh.

Conclusion: Back to the Future, or Further Progress?

With the depletion of the Transportation Trust Fund, New Jersey faces a 1970s redux when economic growth lagged, employment increases slowed, and other regions of the country surged ahead on the strength of transportation infrastructure advantages. Will New Jersey's future revisit the past when, in the absence of appropriate investment in transportation, the state suffered economically?

For the past six years, through good times and bad, New Jersey has generally outperformed the nation. This is attributable to several factors—a balanced business sector, the state's high income and wealth position, and its well-educated workforce. However, a fundamental underlying reason for New Jersey's economic success is the investment the state previously made in its multimodal transportation system. The close linkage between economic development and transportation capacity requires public action to ensure that the strong performance of the New Jersey economy continues in a national

[7] *See* Eric Lipton, "New York Port Hums Again, With Asian Trade," *New York Times*, November 22, 2004.

[8] In addition, PATH service was also critical in providing access to the new office complexes.

and world economy dominated by ever-increasing competition and technological change.

In the postwar era, New Jersey's economy and residents benefited enormously from the 1,900 miles of state highways built before World War II, the 142 miles of the New Jersey Turnpike, and the 164 miles of the Garden State Parkway. An additional 415 miles of the Interstate Highway System in New Jersey were completed in 1992. Since then, the state has added 625,000 jobs, translating to 625,000 work trips each morning *and* each evening that consume much, if not all, of the new transportation capacity provided by the Interstate roads.

No equivalent addition to highway infrastructure is in New Jersey's future as land-use controls, environmental objections, and constraints on land availability preclude new road projects of the scale of the highway investments of the twentieth century.

Instead, continual and significant upgrades of all aspects of the state's transportation infrastructure are required—rail, port, and highway. The expansion for 35 miles of the New Jersey Turnpike between Exits 8A and 6 is the type of project that will characterize future road and rail infrastructure investments. The goal of such investments is to improve the existing system so as to reduce cost increases on businesses, workers, residents, and governments that result from transportation constraints. Such cost increases have the potential to significantly damage the state's economy and reduce the rate of growth of income, jobs, and private investment.

A future that portends transportation gridlock distressingly and convincingly conveys, perhaps like no other single aspect of quality of life, the prospect of intolerable time and money costs of operating and living in New Jersey. If congestion and transportation costs rise significantly because of inadequate investment, existing businesses and residents will increasingly choose to relocate outside of the state and region. Moreover, location choices by potential new businesses and new households will also be negatively affected.

The magnitude of the costs imposed on business and individuals from inadequate transportation is staggering. Studies of highway congestion costs indicate that the current costs of congestion in the region are very significant and have been increasing rapidly. The estimated annual costs of congestion in the NY-Newark, NY-NJ-CT urban area were $7.1 billion in 2002, up 54 percent since 1996.[9] Out of 85 urban areas studied, the region ranked second in total congestion costs and in total annual hours of delay (394.7 million hours). The congestion costs incurred by each peak-time traveler were approximately $900 per year, up by 31 percent from 1996. Each peak-time traveler experienced 50 hours of congestion delays annually. Total congestion costs for the Philadelphia urban area, which includes significant parts of New Jersey, were estimated at $1.8 billion in 2002, tenth highest in the nation. Total congestion costs of the Philadelphia region have increased by 95 percent since 1996.

These estimates of congestion costs do not include the delay costs experienced by rail commuters, by businesses using rail and port connections, and by air travelers due to transportation capacity and system constraints. Since transportation investment requires significant time from authorization to implementation, further increases in congestion costs of the magnitude experienced recently have the potential to significantly damage the region's economy. Delay in investing to ensure the state's collective mobility begets decline and decay in the ability of people and businesses to live, work, and function in New Jersey. This imperative cannot be delayed. New Jersey must take the high road in making effective and immediate decisions to provide the transportation investments required to maintain the quality of its residents' lives and enhance their ability to work in a world economy where success is ever more dependent on access, speed, and movement. ■

[9] *See* David Schrank and Tim Lomax, *The 2004 Urban Mobility Report* (Texas Transportation Institute, Texas A&M University System, September 2004). Congestion costs include the money value of time, commercial costs per hour of delay, and additional fuel costs.

References

Cunningham, John T. 1997. *Railroads in New Jersey: The Formative Years.* Andover, NJ: Afton Press.

Goller, Robert R. 1999. *The Morris Canal Across New Jersey by Water and Rail*. Charleston, SC: Arcadia Publishing.

Gordon, John Steele. 2004. *An Empire of Wealth: The Epic History of American Economic Power*. New York: HarperCollins.

Lipton, Eric. 2004. "New York Port Hums Again, With Asian Trade." *New York Times* (New York Region). November 22.

Michaelson, Juliette Dellecker. 2004. "Walk-and-Ride: How MidTOWN DIRECT Has Affected Residential Property Values within Walking Distance of Train Stations." Master's Thesis, Columbia University, New York. May.

Scanlon, Rosemary, and Edward S. Seeley, Jr. 2004. *At Capacity: The Need for More Rail Access to the Manhattan CBD*. New York: New York University, Rudin Center for Transportation Policy and Management. November.

Schrank, David, and Tim Lomax. 2004. "The 2004 Urban Mobility Report." College Station, TX: Texas A&M University System, Texas Transportation Institute. September.

State of New Jersey, Department of Transportation. 2001. *People—The Transportation Connection*. October.

The authors would like to thank Will Irving for research assistance, Arlene Pashman for editorial reviews, and Debbie Vogel for publication preparation.

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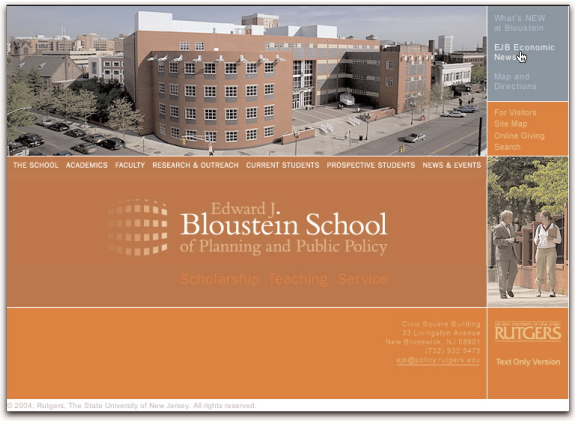
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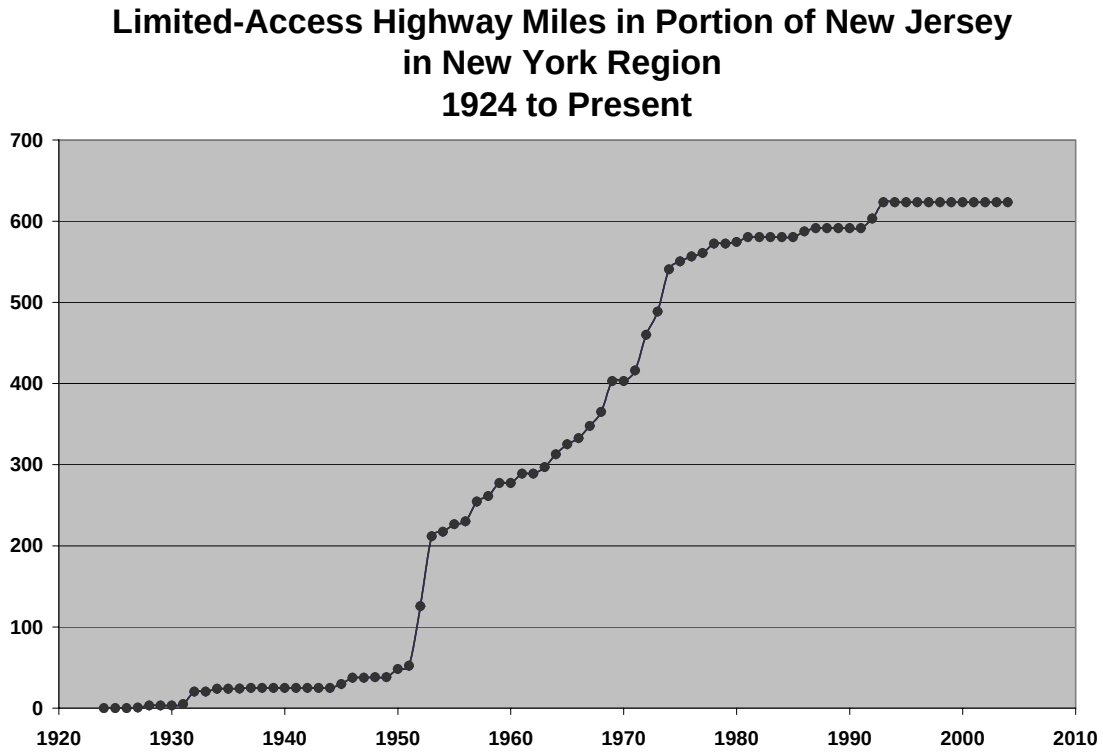
Appendix B



Regional Plan Association, compiled sources over time

Introduction

The Capital Investment Strategy for Fiscal Years 2006 – 2010 lays out capital investment goals for the New Jersey Department of Transportation and the New Jersey Transit Corporation. This report is a companion document to the Proposed Capital Program for Fiscal Year 2006. The Proposed Capital Program details the projects to be funded during the next fiscal year. The Capital Investment Strategy discusses the goals and longer-term strategy behind those project choices.

The first section of the report describes the capital investment strategy for programs funded by the Department of Transportation (NJDOT). The second section describes the capital investment strategy for NJ TRANSIT.

The Capital Investment Strategy is based on the same funding assumptions as the Proposed Capital Program and the draft multi-year program: that state and federal funding will continue at roughly current levels (an annual total of $2.7 billion for both NJDOT and NJ TRANSIT) into the future. There is no guarantee that these assumptions will be realized. In fact, unless the New Jersey Transportation Trust Fund is reauthorized and replenished, there will be no state-funded program after Fiscal Year 2006, and total investment levels will plummet. The absence of state funding will also jeopardize our ability to draw down federal funding, which requires a state "match." As detailed program discussions in this report will show, increased investment levels are required in many areas to meet program goals, improve the mobility of our citizens, and assure the soundness of our transportation infrastructure.

The NJDOT section of the report discusses programs in areas such as bridge preservation, roadway preservation, safety, congestion, bicycle and pedestrian needs, aviation, goods movement, local aid, and capital program delivery. Most projects and programs funded by NJDOT can be classified into one of these areas, but it is important to note that many projects serve more than one purpose. A highway rehabilitation project may include intersection improvements that relieve congestion bottlenecks. A bridge replacement project may provide improved sight distance and other measures that enhance safety.

For some program areas, NJDOT's capital investment strategy methodology has developed to the point that quantitative assessments can be made of the effect of different funding levels on the future condition of elements of the transportation system. Other areas are subject to a more qualitative analysis.

Every capital program involves the making of choices and tradeoffs. As the Capital Investment Strategy and the Proposed Capital Program both demonstrate, NJDOT is committed in the near future to continued high funding levels for bridge needs, roadway preservation needs, and safety and the implementation of a wide spectrum of innovative and effective means of fighting congestion and improving mobility and accessibility. Statutory goals set out in the Congestion Relief and Transportation Trust Fund Renewal Act of 2000 is discussed in detail in the report.

The NJ TRANSIT section of the report outlines the goal of NJ TRANSIT's Capital Investment Strategy (CIS) to improve the reliability, frequency and geographic reach of the state's transit network to increase transit ridership, promote smart growth and drive the state's economy.

First, the Ten-Year Capital Investment Strategy calls for continued investment in the state's transit infrastructure to achieve and maintain a state-of-good-repair. The CIS targets infrastructure rehabilitation, bus and rail equipment replacements and technology improvements to modernize customer information and fare collection systems.

Second, the Ten-Year Capital Investment Strategy calls for the tremendous need to grow core transit system capacity to serve ambient market growth and new customers. Increasing rail capacity along the Northeast Corridor into Midtown Manhattan is the keystone of future capacity.

In addition to increased capacity of rail and bus right of way, the Capital Investment Strategy calls for expanded commuter parking, the creation of new regional inter-modal park & rides, and expanded rail fleet and yard capacity.

Finally, the CIS also calls for selective service expansions that work with and fully complement prior investments.

NJ TRANSIT's Capital Investment Strategy will guide transit investments in New Jersey for the next ten years. Implementing the CIS will deliver an improved transit system to the state, one of greater reach, reliability and level of service.

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NJ Department of Transportation
Capital Investment Strategy (CIS)

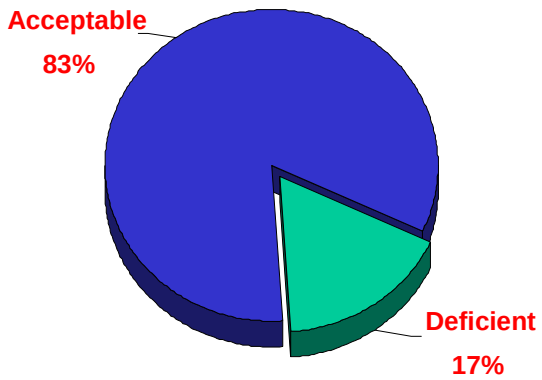
Bridge preservation

New Jersey's highway bridges

New Jersey's highway bridges—more than 5,000 of them—are vital links in our state's transportation system. Restoring deficient bridges to good condition continues to be a fundamental element in NJDOT's capital investment strategy.

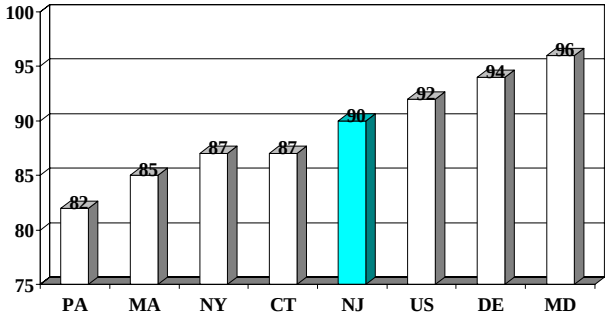
Even the best built bridges deteriorate over time, as a function of traffic loads and exposure to weather. Typically bridges that are more than 50 years old need attention, possibly rehabilitation or replacement. New Jersey's average bridge age is 47 years, nine years more than the national average. About 40 percent of our bridge population is more than 50 years old.

As a result of our substantial investment in the bridge program over the past several years, about 83 percent of our bridges (state, county, and local) are in acceptable condition. Our major bridges (defined as those on the federally designated National Highway System) are in even better overall condition, with 90 percent ranked as acceptable. This compares reasonably well with the national average and with other states in our region.



New Jersey bridge condition

Comparison of major bridges



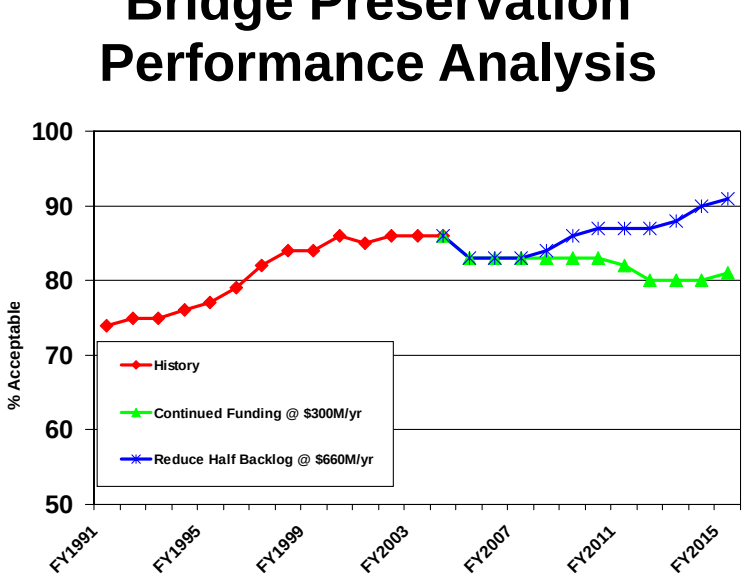
It is critical to an understanding of bridge conditions to note that the "backlog" of deficient bridges is not static. While some bridges are being repaired and being reclassified from "unacceptable" to "acceptable," other bridges are continuing to age and will be reclassified from "acceptable" to "unacceptable." That is why even if we continue to fund the bridge program at high levels—or even increase those levels—we expect a drop in overall bridge ratings over the next several years. A significant number of major bridges will be reaching the point where rehabilitation or replacement will be required. More details on the "high-cost bridge" problem will be given later.

Bridge preservation

Meeting the need

NJDOT's long-term goal continues to be to move the entire population of bridges into the "acceptable" range and to keep them there. Given the sheer number of bridges and the ongoing aging and deterioration process, this will be a huge effort requiring many years to achieve. A closer-term objective, as identified by the Legislature in the Trust Fund amendments of 2000 (N.J.SA 27:1B-22.b) is to reduce the backlog by half over 10 years.

How do we reduce the backlog? First, it is important to remember that the backlog is not static. If nothing is done, the backlog will grow significantly. Even with substantial investment, the backlog will grow somewhat. In fact, with no investment, the number of acceptable bridges will drop from the current 83 percent to about 73 percent in 10 years. NJDOT is currently investing about $300 million a year in rehabilitation and replacement of deficient bridges on the state and local systems. Given a "flat" funding projection into the future, it would be difficult to increase this investment significantly. At this "continuation" rate of funding, the bridge acceptability rate is expected to decline from 83 percent to about 81 percent over the next 10 years. Reducing the backlog in half in 10 years (to an acceptable rate of 92 percent) would require an annual investment of about $660 million, an increase of about 120 percent.



NJDOT is also pursuing a variety of measures to address bridge deficiencies within the limits of available funding. There is a new emphasis on seeking rehabilitation as opposed to replacement of bridges. Rehabilitating a bridge—instead of tearing it down and building a new one—is usually cheaper and may also fit better with local community desires. There are tradeoffs, however. Building a new bridge often provides an opportunity to alleviate traffic problems and may avoid the necessity of detour routes during construction.

NJDOT is also stretching available financial resources through the use of innovative finance for high-cost bridges and through seeking lower-cost solutions to maintain bridges in good working order. Some of these other programs are discussed on another page.

Bridge preservation

High-cost bridges

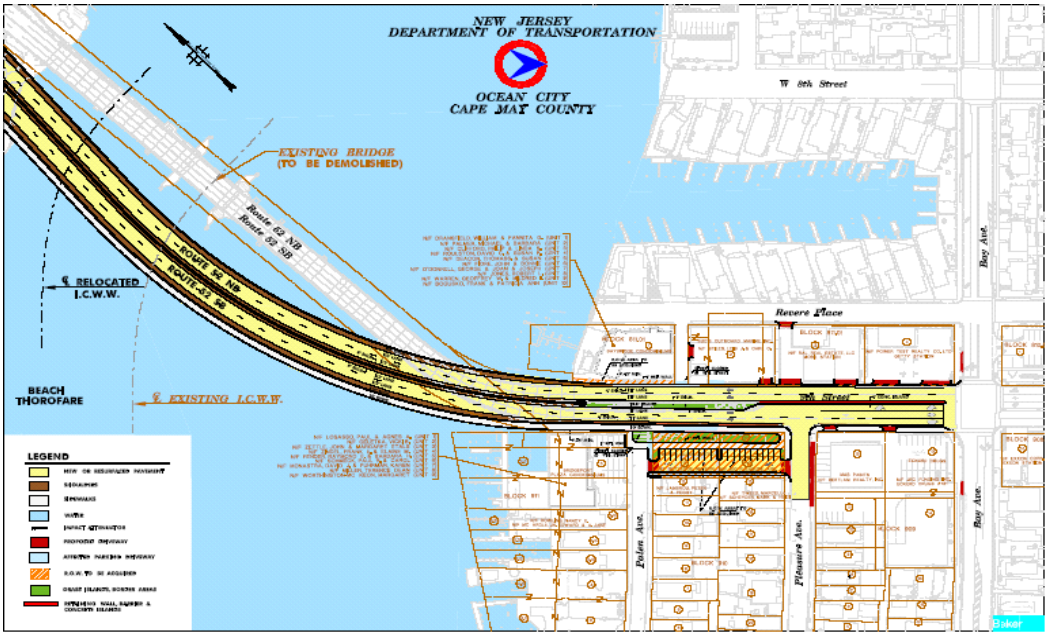
One of New Jersey's greatest funding challenges is finding a way to pay for a small number of "high-cost bridges." These bridges (defined as those costing more than $50 million in construction costs) are critical links in the state's transportation system. Beginning in the late 1990s, several of these major bridges reached the point where replacement or rehabilitation became essential. NJDOT has been steadily advancing projects to upgrade these structures. Within the past few years, for example, all the highway bridges over the Raritan River near the mouth of the river have been replaced, rebuilt, or are under construction. A new Route 1&9 viaduct over the Elizabeth River is also under construction.

Eight major bridges are on the current "high-cost" list awaiting funding. Together they constitute a need of nearly $2 billion in construction funding over the next several years. Those bridges include:

- Route 1&9 Pulaski Skyway—Major historic structure linking Newark and Jersey City. Repainting of this huge viaduct will cost more than $150 million. Deck replacement is estimated to cost as much as $300 million.
- Route 1&9T, St. Paul's Avenue Bridge—Major truck route and key link in the Portway system. Construction cost $140 million.
- Route 3 bridge over the Passaic River—Many structural, operational, and safety deficiencies; traffic bottleneck on one of New Jersey's most congested corridors. Replacement will cost approximately $235 million.
- Route 7 bridge over the Hackensack River (Wittpen Bridge)—Key traffic and goods movement link; part of Portway. Construction cost estimate $370 million.

The new Route 52 at Somers Point

The new Route 52 at Ocean City



- Route 52 Causeway—Reconstruction of the causeway connecting Ocean City and Somers Point, including replacement of deficient bridges. Major tourist and shore evacuation route. Total construction cost estimated at $322 million.
- Route 72, bridge over Manahawkin Bay—Another key tourist and shore evacuation link. Estimated cost $83 million.
- Route 139 viaduct, contract #3—The third in a series of construction contracts rebuilding the viaducts leading to the Holland Tunnel. Key interstate link. This third contract will cost approximately $125 million.

For the next capital program NJDOT is recommending that New Jersey use an "innovative financing" technique offered by the federal government to advance some of these bridges. This technique, known as GARVEES, allows states to make payments out of their future federal funding to pay for very expensive projects. NJDOT is planning to use GARVEES in fiscal year 2006 to fund the Route 52 causeway project, which might otherwise be delayed for several years. The third contract for Route 139 is planned for GARVEE finance in fiscal year 2008.

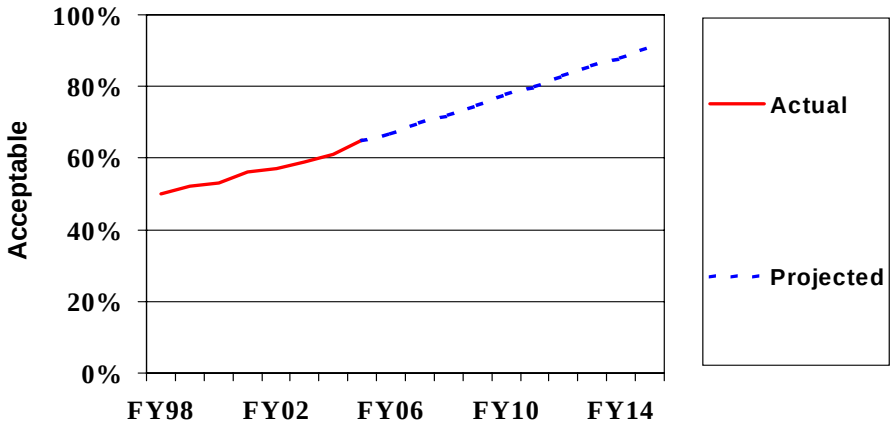
Bridge preservation

Bridge programs

Along with the more expensive bridge rehabilitation and replacement projects, NJDOT implements several programs aimed at maintaining or improving bridge conditions:

- Bridge deck rehabilitation—Sometimes only the deck of a bridge—the part that actually carries the traffic—is deficient. In these cases, NJDOT is often able to solve the problem through the bridge deck rehabilitation program, which offers cheaper, faster repairs.
- Bridge painting—Steel bridges require strong, weather-resistant coatings to protect them from corrosion. Many bridges were once painted with lead-based paints. Replacing lead-based paints with modern, environmentally friendly paints requires expensive containment and disposal. About one-third of the population of state highway bridges still needs recoating. NJDOT is currently spending about $11.5 million per year on bridge painting. At this rate, the deficiency level will be reduced to less than 10 percent over the next 10 years.
- Bridge scour program—Bridges crossing waterways are subject to damage from extreme stream flows during flooding, which can wash away underwater support structures. NJDOT is working with the Federal Highway Administration (FHWA) to identify bridges most at risk and to design and implement underwater protection.
- Bridge betterments program—This program funds minor repair work done by contract.

Bridge painting needs

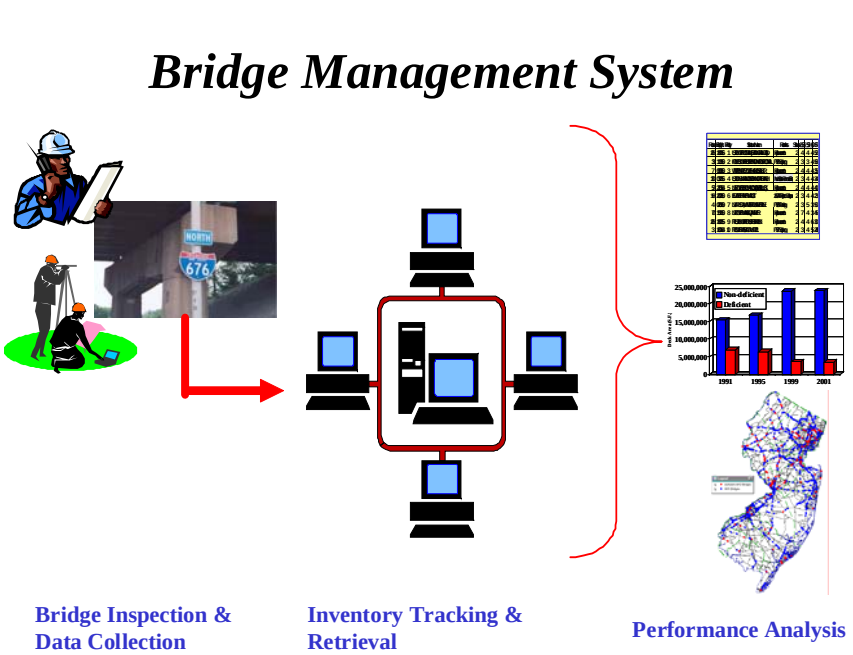


Bridge preservation

Bridge management system

A brief technical note concerning how NJDOT collects and analyzes bridge data may be helpful to understanding how the capital investment strategy for bridges is developed.

NJDOT operates a bridge management system to track detailed information on the status of every bridge in the state and on overall system conditions and trends. Every bridge is inspected at least every other year. The inspection includes a careful engineering examination of every component of the bridge—the substructure, superstructure, and deck. This data is fed into a computerized system for further evaluation. The analysis is used both to initiate specific bridge rehabilitation and replacement projects and to develop systems level projections. The bridge inspection process, which is done under consultant contracts, costs $12 to $15 million per year.



What is "acceptable"? For capital investment strategy purposes, NJDOT relies on a federally developed definition of structural deficiency. A bridge is considered structurally deficient if it scores a low rating on one or more of several engineering standards.

It is important to note that a structurally deficient bridge is not an unsafe bridge. Structural deficiency indicates a need for possible rehabilitation or replacement. If a bridge is determined to be unsafe, it is closed to traffic. If a bridge is so deficient that it is in danger of rapid deterioration, it may be posted for maximum load. At the current time, no bridges on the state highway system are closed or load-posted due to poor condition. For capital investment strategy purposes, NJDOT also factors "deck square footage" of each bridge into the scoring, so as to give weight to the size as well as the number of deficient bridges.

The bridge management system also incorporates expected deterioration rates into its projections, so that the "backlog" of bridges in unacceptable condition is properly seen as a moving target.

NJDOT also maintains other management systems—for pavement, congestion, safety, and drainage—to monitor the condition of our infrastructure and to develop projections for the capital investment strategy.

Roadway preservation

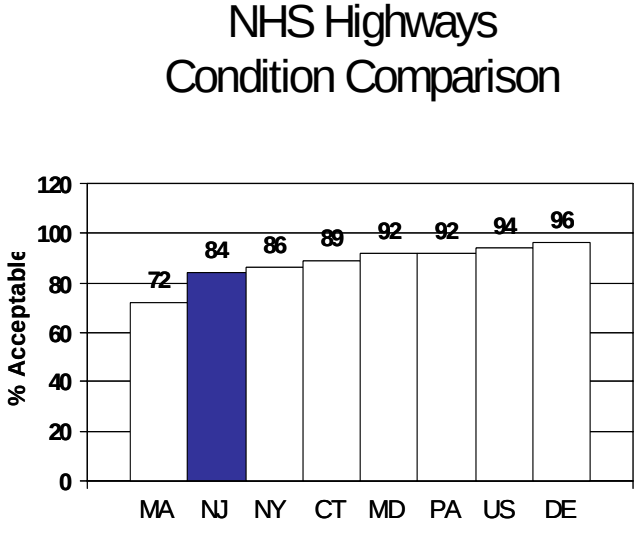
Condition of New Jersey's state highways

New Jersey's 2,300-mile state highway system accounts for only about 6 percent of the road miles in the state but carries about two-thirds of the traffic. The daily pounding of heavy traffic, the effects of winter weather, and the aging of highways built decades ago combine to create an increasing need for investment in pavement repair work.

What shape are our highways in? Using the most recent comparative data available for highways on the designated "National Highway System" (interstates and other major roads), New Jersey scored worse than most of our neighbors. The overall condition of the system has declined markedly in recent years, as a product of aging, traffic, and past underinvestment. It is estimated that currently one half of the system is rated below an "acceptable" standard. (New Jersey's pavement management system has developed performance measures which provide different standards for different types of highway, producing an overall "acceptability" rating for the system.)

Accruing deterioration has continued in spite of the fact that NJDOT capital programs have addressed pavement deficiencies as much as possible, subject to available funding levels, project schedules, and the necessity to accommodate other competing needs. Funding availability for resurfacing, rehabilitation, reconstruction, and particularly preventive maintenance programs remains the major constraint to pavement quality improvement.

A previous study done for the pavement management system (discussed in the fiscal 2005 capital investment strategy report) suggested an urgent need for major reconstruction of many of our interstates and other state highways. This data is now being re-evaluated, and current analysis indicates that the life of many of these highways can be extended with less drastic measures. Nevertheless, there is a real decline in overall highway conditions, and higher program levels will be necessary to restore the system to good condition.



Roadway preservation

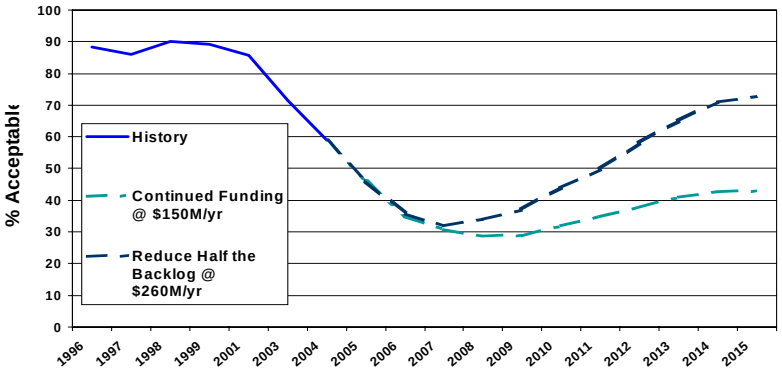
Meeting the need

New Jersey's How do we reverse the decline in the condition of our state highways?

An analysis based on recent data indicates that only about 46 percent of the system is in acceptable condition. If we invest at a minimal level of approximately $150 million per year for the main pavement programs of resurfacing and highway rehabilitation and reconstruction (equal to the lower numbers in recent history) the overall condition will be worse in 10 years than it is today. To eliminate one-half the backlog of deficient pavement over the next 10 years, as specified in New Jersey's Transportation Trust Fund Act (NJSA 27:1B-22), we would need to increase these base programs to a level of about $260 million a year. The proposed capital program anticipates a funding level midway between these.

In addition to these core programs, the roadway preservation area also includes drainage projects (discussed elsewhere), replacement or repair of dams located on the state highway system, and highway capital maintenance activities. NJDOT has expanded its highway capital maintenance activities to use state-of-the-art pavement preservation techniques which promise longer pavement life at a reduced cost.

Pavement Preservation
Performance Analysis



Roadway preservation

Drainage

New Jersey's The aging of existing drainage systems, inadequate resources to maintain them, and increased (and sometimes poorly planned) development along state highways have all contributed to an increasing incidence of flooding problems. This in turn means that key elements of the state transportation system are periodically failing to perform—often at times when they are needed the most.

Ten years ago NJDOT began developing a drainage management system (DMS) to identify, evaluate, and prioritize drainage problems on the state highway system. The drainage management system ranks identified problems based on the number of homes, businesses, and emergency facilities affected by flooding; traffic impacts; environmental impacts; safety hazards; frequency of flooding; and the estimated cost to mitigate the flooding. DMS analysis also recommends a proposed solution. This may lead to a full-scale project moving through NJDOT's project development system or to a "cleanout" of the drainage system using one of the drainage rehabilitation and maintenance programs.

About 60 sites are currently identified for work in NJDOT's capital program or study and development program. About 100 more sites are being reviewed for possible future action. At a funding level of about $20 million per year, it is estimated that we will reduce the total backlog of identified drainage needs by one-half over the next 10 years. The proposed capital program would invest in drainage needs at a slightly higher level.

Safety

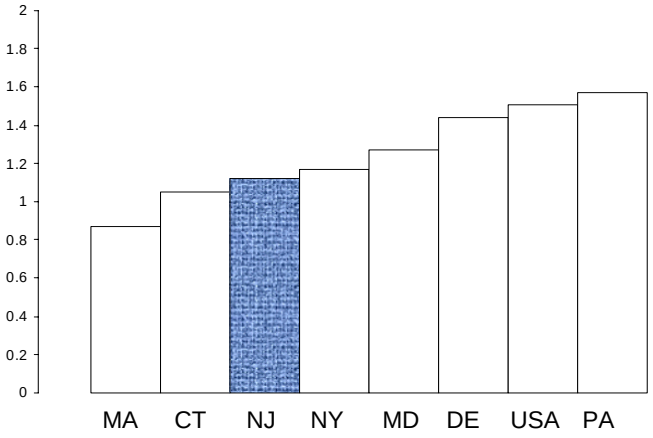
How safe are our highways?

New Jersey is the most densely populated state in the nation. It also has 36,000 miles of roadway and is a crucial transportation corridor between the New York and Philadelphia metropolitan regions. With so many motor vehicles traveling New Jersey's interstate freeways, toll roads, and state highways each day, vehicular crashes on our roads are not uncommon sights.

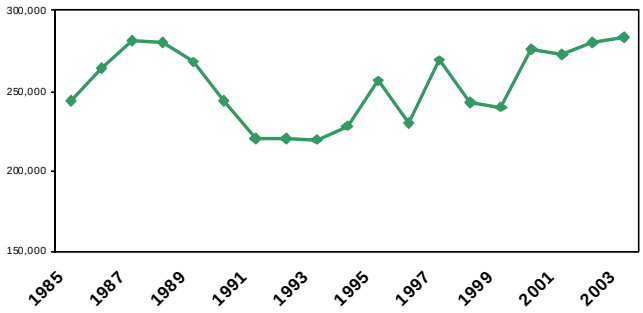
Tragically, these crashes result in deaths, severe injuries, and unrecoverable economic losses. In 2003, there were over 300,000 crashes reported on New Jersey roadways including 640 fatal crashes, which also resulted in 147 pedestrian fatalities. There were also 76,627 crashes involving injuries. Economic losses as a result of motor vehicle traffic crashes in New Jersey were estimated at $9.3 billion.

As total traffic volume has grown over the past several years the number of crashes has increased. However, the number of fatal crashes and injury crashes has decreased. This declining yet favorable trend is the result of many factors, including safer cars, more seatbelt usage, less drunk driving, and safer roadways. Compared with other states in the Northeast, New Jersey has one of the lowest fatality rates.

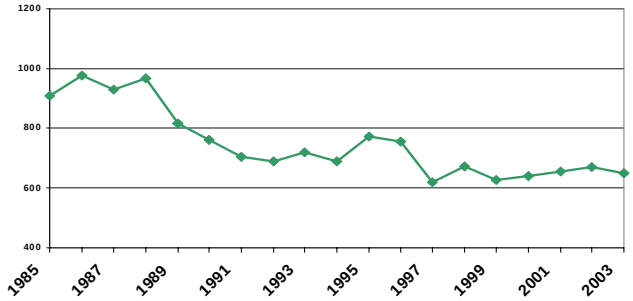
Fatalities Rate
per 100 Million Vehicle Miles Traveled



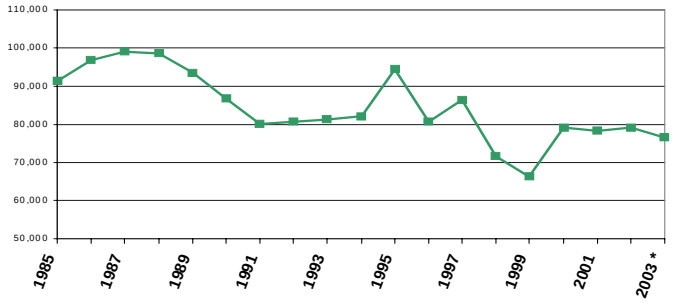
Total Crashes

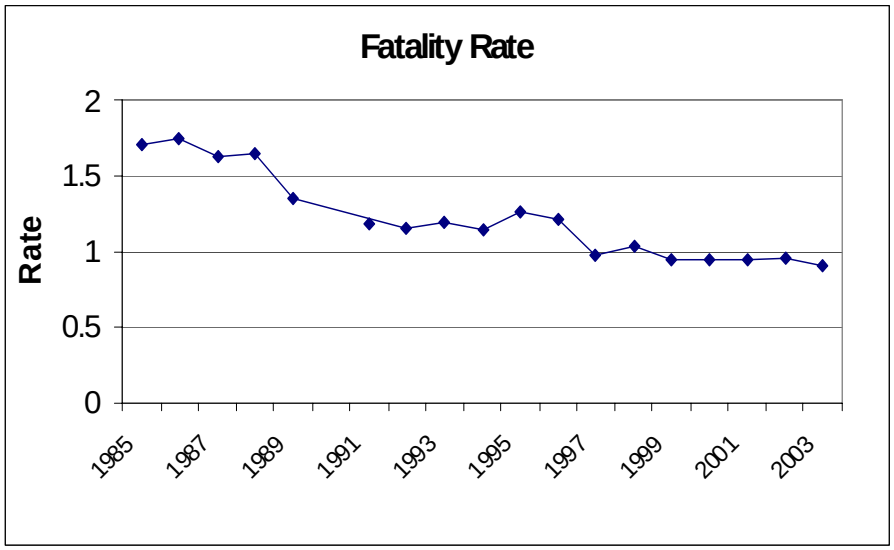


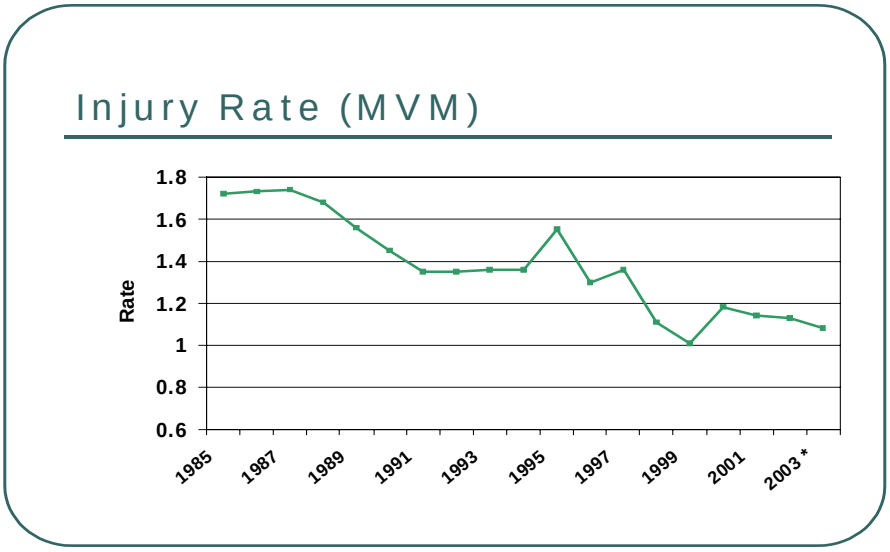
Fatal Crashes



Injury Crashes




Fatality Rate
Rate
2
1.5
1
0.5
0
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003


Injury Rate (MVM)
Rate
1.8
1.6
1.4
1.2
1
0.8
0.6
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003 *

Safety

Safety First

New Jersey's comprehensive approach to improving highway safety is called Safety First. Safety First began in March 2003 with the convening of the Governor's Highway Safety Task Force, including representatives of NJDOT, the State Police, other state agencies, and a variety of public and private groups interested in promoting safety on the roads. The initiative pursues all aspects of the highway safety problem: Engineering (making roads safer), Education (encouraging better driving habits), and Enforcement (stopping unsafe and illegal driving).

New NJDOT initiatives launched as part of the Safety First program include:

- Median crossover crash prevention program—Installation of guiderail or cable along grass highway medians to prevent out-of-control vehicles from crashing head on into opposing traffic.
- Safe corridors program—Implementation of improvements recommended by safety impact teams within designated safe corridors.
- Safe streets to school program—Support for municipal projects to improve sidewalks and street crossings to provide safer access to schools for walking students.

NJDOT is now working with more than 20 agencies and organizations in a new Safety Management Task Force to develop a Comprehensive Safety Plan for the future. The task force has already developed draft Vision, Mission, and Goal statements:

- Vision – We will strive to operate the safest surface transportation system that will ensure the health and well-being of all users.
- Mission – To develop, promote, and implement education, enforcement, and engineering strategies for reducing the frequency and severity of vehicle and pedestrian crashes on New Jersey's transportation system.
- Goal – To continually reduce the frequency and severity of crashes statewide.

The task force is now in the process of identifying emphasis areas for future efforts.

Safety

Safety programs

New Jersey's NJDOT implements a broad spectrum of safety programs aimed at reducing the frequency and severity of crashes and promoting the all-round engineering, education, and enforcement approach of Safety First. The median crossover crash prevention program and the safe streets to schools program were previously mentioned. The safe corridors and safety intersection improvements programs are discussed in detail on other pages. Some of the other key programs are:

- Accident reduction program—Specific countermeasures, such as raised pavement markers and skid-resistant pavement treatment, are implemented at crash-prone locations.
- Senior safety pilot program—NJDOT is studying new ways to improve safety for our growing senior population, including a combination of improvements in engineering, design, operations, motorist communication, and education.
- Pedestrian improvement program—NJDOT identifies sites with pedestrian problems and develops countermeasures.
- Motor vehicle crash record processing—Funding is provided for entry of all New Jersey crash data into a computerized database for analysis.
- Traffic engineering improvements—NJDOT is upgrading design and materials for signing, striping and pavement markings, signals, lighting, and pedestrian treatments.
- Local safety initiative—This initiative involves the state's metropolitan planning organizations (MPOs) in selecting safety projects on county and municipal roadways.
- Safety management system—NJDOT operates a computerized system for analyzing crash data and identifying highway segments and specific types of crashes that warrant attention.

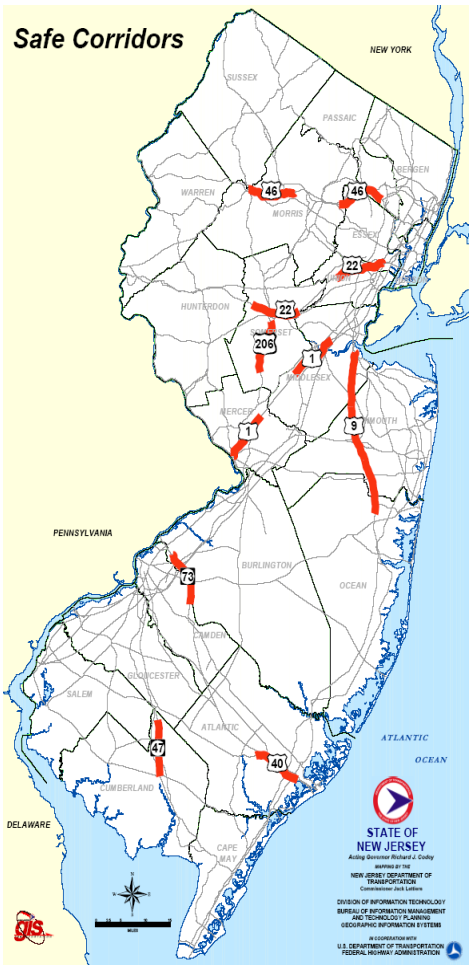
Safety

Safe corridors

At the recommendation of the New Jersey Highway Safety Task Force, the Legislature enacted a "Safe Corridors" act (NJSA 39:4-203.5) in July 2003 that increases fines for traffic violations on crash-prone highway segments. Under the act, "safe corridor" is defined as a segment of highway under NJDOT jurisdiction that is identified by the Commissioner as warranting that designation based on accident rates, fatalities, traffic volume, and other highway safety criteria.

The purpose of the safe corridor program is to significantly reduce the frequency and severity of overall crashes and specific crash types on these highways. Fines for certain traffic violations are doubled within the designated corridors, and NJDOT has developed a methodology to reduce the number and severity of crashes through a variety of engineering, educational, and enforcement practices. Special "safety impact teams" analyze crash data and problem areas and make recommendations for safety countermeasures using a variety of programs.

Safe corridor locations are identified and ranked according to an analysis of various factors, including total crashes, crash rates, fatalities, injury crashes, and property damage. The final list of 13 locations designated under the act met a minimum of 1,000 crashes over 3 years and a crash rate 50 percent higher than the statewide average. These locations total 129 miles along Routes 1, 9, 40, 46, 47, 73, and 206.



Safety

Safety intersection improvements

The safety intersection improvement program has proven to be an effective, inexpensive way to make relatively quick improvements at intersections showing a history of crash problems. The purpose of the program is to significantly reduce the frequency and severity of overall crashes and specific crash types occurring on the state, county, and municipal roadway systems and also to reduce the number of intersection crashes statewide. The program identifies intersections that appear to exhibit operational, geometric, and driver expectancy shortcomings.

Intersection locations are identified and ranked according to a calculated "severity index" based on crash data. The severity index is also based on the "equivalent property damage only" scale used by police officers reporting crashes. These data are summed and analyzed, yielding overall intersection rankings. All potential project locations are also screened for over-represented crash types as compared to the statewide averages for similar locations. NJDOT safety investigators use all of this information to analyze intersections identified through this process and to recommend countermeasures. In many cases, improvements to signs, striping, and traffic signals can reduce the occurrence of crashes. In other cases, more extensive improvements, such as redesigning intersections to add protected turning lanes, may be necessary.

Some intersections recently improved under this program include:

- Route 15 and Berkshire Valley Road— Side street left-turn signals and a flashing "Red Signal Ahead" sign were installed to help with the northbound rear-end crash problem. As a result of these two countermeasures accidents were reduced by 50 percent.
- Route 9 and Robertsville Road—This intersection experienced roughly 40 crashes per year labeled either as "at intersection" or "same direction" within 500 feet of the intersection on its two major approaches. New traffic signals were installed and an additional southbound lane was added. In the first year after these improvements were made, the number of crashes dropped almost in half.
- Route 46 and Bergen Street and Mount Hope Avenue—To countermeasure a severe left-turn crash problem being experienced in both major street directions of the four-lane arterial highway because of "shadowing crashes," the westbound lead left-turn movement was prohibited and its former lead left-turn phasing was switched to the heavier volume eastbound direction. Some other upgrades included a southbound lead phase, revised northbound lane use signing and striping, and the installation of pedestrian signals. The crashes targeted for these treatments were reduced by more than 50 percent.

Congestion, mobility, accessibility

Congestion in New Jersey

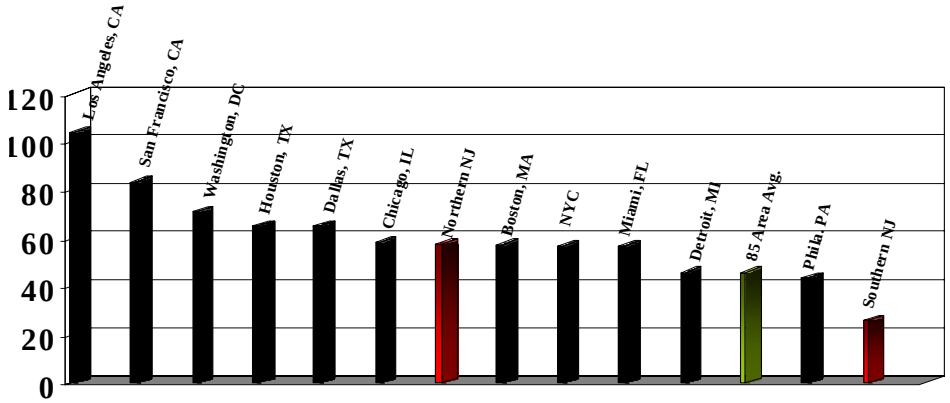
Just how bad is traffic congestion in New Jersey? The 2003 report of the Blue Ribbon Commission on Transportation reported that traffic delays cost New Jerseyans 261 million hours in lost time and about $7.3 billion in economic costs every year. The New Jersey motorist knows that traffic congestion is bad and – in most places – getting worse.

How does traffic congestion in New Jersey compare with the rest of the country? Data compiled by the Texas Transportation Institute shows that among the largest metropolitan areas in the country, northeast New Jersey ranks 7th, about the same as Chicago and Boston. The south Jersey portion of the Philadelphia region does better, ranking 44th, similar to smaller urban areas such as Stamford, Connecticut and Raleigh-Durham, North Carolina.

Congestion is a product of population growth, economic growth, and sprawl development. Based on present trends, congestion will continue to grow. NJDOT's congestion management system estimates that between 2001 and 2015 total traffic (measured in vehicle miles traveled) will grow by 18 percent on New Jersey's interstate highways and freeways and by 15 percent on other major roads.

What can be done about the congestion problem? Building enough new roads to accommodate growing traffic is simply not possible in New Jersey. In a densely populated state where people value their quality of life, massive new road construction is simply too expensive, too disruptive, and too controversial to succeed. There are, however, steps that can be taken to tackle the congestion problem.

Annual Hours of Delay per Traveler for Very Large Urban Areas (Year 2002)



Congestion, mobility, accessibility

Fighting congestion

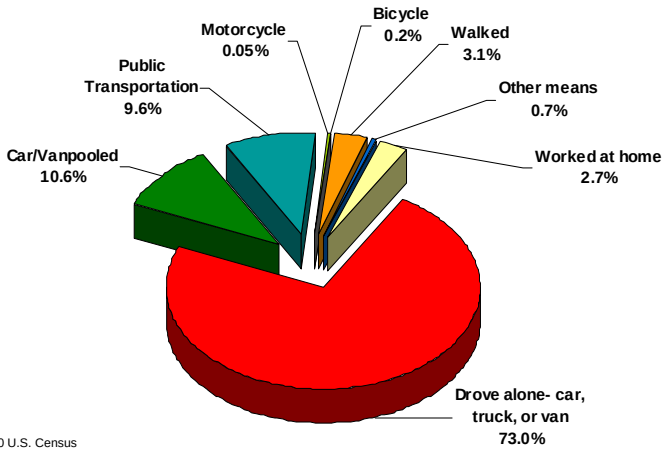
In today's New Jersey, highway congestion is a problem that can't be cured: it can only be ameliorated. Population growth, economic growth, changing family patterns, and continuing sprawl development all push highway traffic volumes up. Until better land use planning, more transit availability, and – perhaps – technological innovations begin to take effect, more traffic is in our future.

There are, however, many things we can do to fight congestion and improve the quality of life of our citizens. The new NJFIT (Future in Transportation) program strikes at the heart of the problem by forming partnerships to link transportation planning and land-use planning in select areas. NJFIT is discussed in more detail on another page. Also discussed elsewhere are major highway capacity increases, highway operational improvements, the targeted 10 high congestion areas, bicycle and pedestrian improvements, and the intelligent transportation system (ITS) program.

There are several other key components to our congestion fighting campaign. These include:

- Park and ride—NJDOT is investing about $7.0 million per year, in addition to NJ TRANSIT's program, to support existing and new park and ride locations. This program also implements other transportation demand management strategies, including commuter ridesharing assistance, marketing of alternatives to single-occupant vehicle use, and statewide voluntary employer programs. Funding will need to be increased as more park and ride locations are identified.
- Transportation management associations—Transportation manage-

Out of the 3.9 million people in New Jersey who travel to work, 73% drive alone



Source: 2000 U.S. Census

ment associations (TMAs) are locally run organizations that organize, support, and market a wide array of ride-sharing and transit alternatives in their regions. NJDOT currently supports these organizations at a level of about $5.3 million per year, although more has been requested.

- Emergency service patrols and incident response—About half of the total delay experienced by highway users is caused by incidents such as crashes and vehicle breakdowns. The Emergency Service Patrol program was launched in 1994 to help keep the highway lanes clear, reduce congestion, and increase safety for all motorists. ESP crews currently assist more than 40,000 motorists a year. The program covers more than 325 miles of interstate highways and freeways, with service from 4:00 a.m. to 8:30 p.m., Monday through Friday, on a majority of holidays, and on weekends during summer months. Incident Management Response Teams work with the State Police to respond to major incidents.
- Signs—Traffic signs help motorists navigate the highway system. Good signage reduces delay by helping motorists move efficiently through the system. Bad signage causes confusion and can add unnecessary miles to a trip. NJDOT has embarked on a comprehensive program to review and upgrade its highway signs. Although not yet an expensive program, additional funds will be necessary in the future.
- Traffic signal timing—Modern traffic signals can be programmed to operate in different patterns at different times of day or in different traffic patterns. NJDOT has begun a modest program of using contractor support to speed up the retiming of traffic signals on arterial highways to accommodate changing traffic patterns.
- Access management—NJDOT has a responsibility to manage access to state highways under the State Highway Access Management Act. A small amount of capital funding is set aside to support this effort. NJDOT has also begun a comprehensive review of its regulations to determine how they might be updated to fit current ideas of improved land-use planning (Smart Growth).

Congestion, mobility, accessibility

NJFIT — Future in Transportation

NJDOT's new approach to the congestion problem can best be seen in the work being done in the studies of congested corridors in the state. Many of these corridor studies would once have automatically resulted in recommendations for major highway capacity increases. In some cases, projects for new highway construction have been on the books for decades.

While some expansion projects will always be necessary, we cannot continue fighting this battle with pavement alone. We are now seeking balanced solutions to meet the inescapable growth in demand. Increasing capacity takes many forms but it must be approached in a spectrum of multi-modal and supply and demand-side solutions.

We have come to realize that our transportation woes are an epidemic in this state and it's time to make our transportation systems and communities healthier. New Jersey can and must make smart, lasting investments in its communities and for its businesses. This is why NJDOT is changing the way we do the business of transportation in New Jersey by launching the *NJFIT: Future in Transportation* initiative. NJFIT is a comprehensive and cooperative approach to transportation and land-use planning. By working with community planners, we can keep the jobs, services, goods, and people that we all seek within reach of every New Jersey traveler. By reinvesting in our infrastructure and shaping transportation to fit into the context of our communities, we are building a better New Jersey for all of us.

The NJFIT philosophy features three principal subject areas. These include:

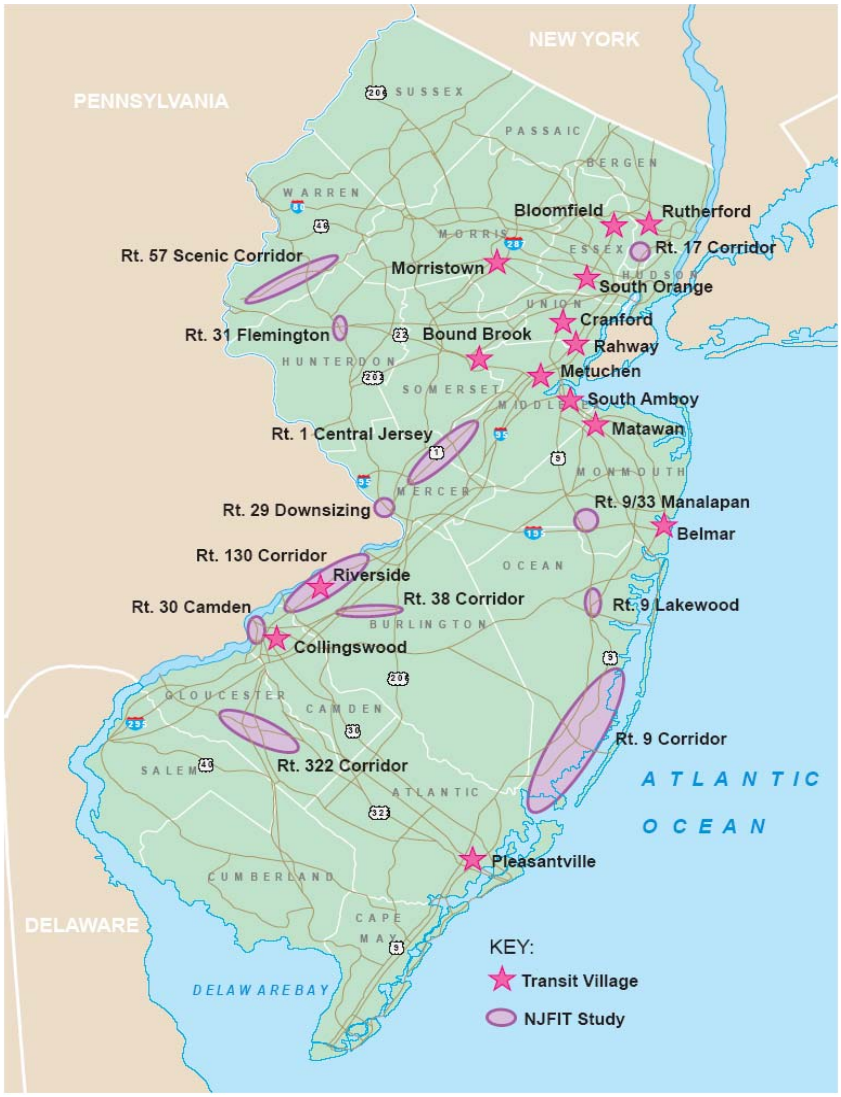
- *Rejuvenating New Jersey via Transportation*: Benefits of a healthier transportation system
- *Prescriptions for Wellness*: Tools to achieve our goals
- *Working Together to Create a Healthier New Jersey*: Education, funding, and technical assistance opportunities

We already have *evidence of progress* with this philosophy: many communities across the State are already working with NJDOT to make intelligent land-use and transportation decisions and realize a new vision for New Jersey. NJDOT has been developing a series of Integrated Land-Use and Transportation Planning Studies to promote lively main streets, sensible land use, streets for the community, lasting investments, economic vitality, safe streets for all, more ways to travel, and healthy streets and communities. A key element of these studies is empowering towns to partner with NJDOT and other state agencies in creating the transportation/land-use balance. Through this

collaboration, NJDOT is providing municipalities with the tools they need to make smart development decisions, facilitating communication, and directing them to valuable resources.

Current NJFIT projects are at various stages of completion, but early feedback from local government partners at the county and municipal levels has reflected a strong willingness to bring local resources to the table as they see the broad community benefits of participation in this program. This success has enabled NJDOT to forge unprecedented partnerships at the state, county, and local levels and with businesses and academic institutions.

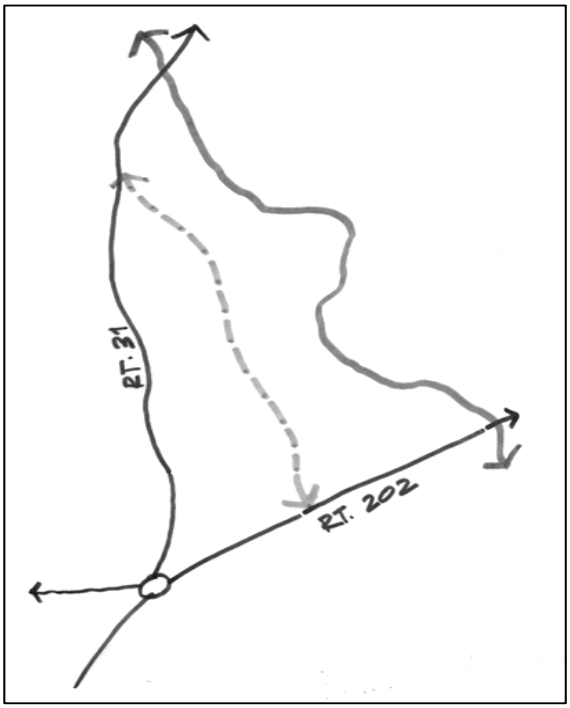
Some of the projects emerging out of the NJFIT corridors are already programmed or anticipated. Future needs, however, are not. Although NJFIT solutions will normally be cheaper than the old-fashioned freeway solutions they are replacing, they will still be expensive – and they will probably be ready for construction much sooner. NJDOT estimates that somewhere in the range of $5 to $10 billion will be needed to meet these demands over the next 10 years. These funds are not programmed or planned at the moment.



Congestion, mobility, accessibility

NJFIT — Route 31, Flemington

A good example of the NJFIT approach to congestion is the work being done in the Flemington area in Hunterdon County. For many years, NJDOT had worked on developing a "Flemington bypass," a freeway which would provide an alternate routing for Route 31 around Flemington. A related proposed project was construction of a flyover at the Flemington Circle. In 2004 NJDOT reviewed these projects and decided that (1) due to cost and environmental impacts it would be many years before the Flemington bypass (as originally conceived) could be built, (2) given our current understanding of congestion and land-use patterns, the bypass and flyover probably wouldn't solve the congestion problem predicted for the future, (3) building these massive highway projects would be a poor way of accommodating access and circulation around planned development, and (4) these roads would probably not be consistent with the local residents' vision of their community's future. NJDOT began a series of intensive discussions with local elected officials and citizens and initiated a new dialogue about how the area was developing and how the transportation system could be redesigned to meet local needs.



The proposed "South Branch Parkway" (dashed line) would provide an additional option for motorists to travel between Route 202 and Route 31 and an additional route for local trips. The Parkway parallels the South Branch of the Raritan River (solid line).

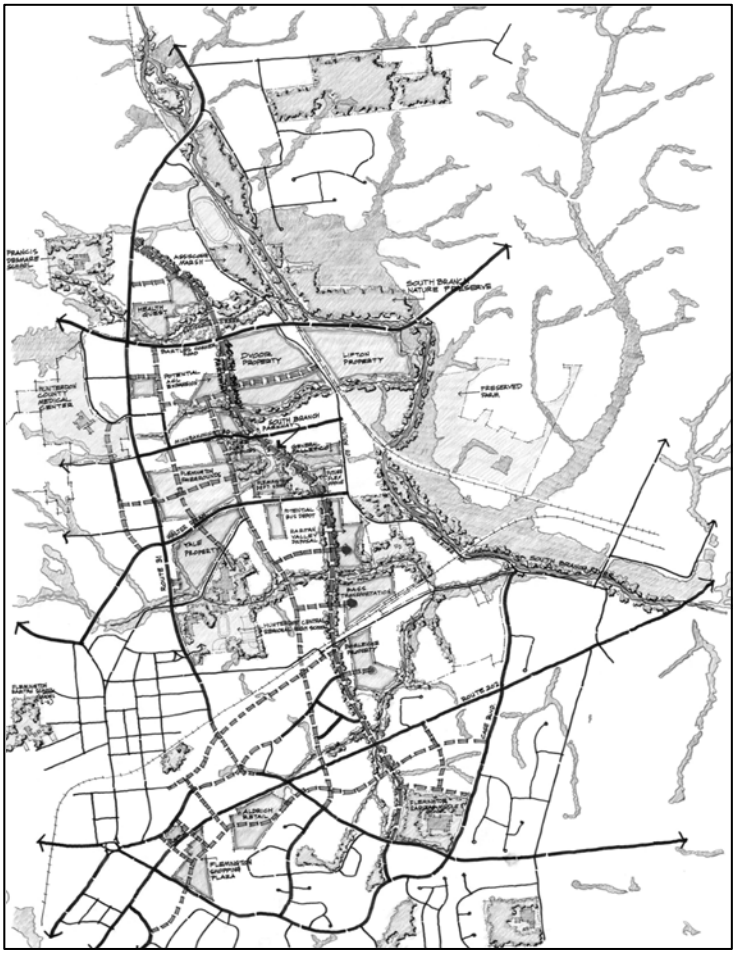
As part of this process, NJDOT and its local partners are now studying a scaled-down and more context-sensitive "bypass" to provide an additional routing option to Route 31 while enhancing the area's transportation network and celebrating the natural, historic, and cultural resources of the area. The Route 31 Land Use and Transportation Plan proposes the "South Branch Parkway" to connect Route 31 and Route 202. The 2-lane parkway would define an edge between the area's urban/suburban and rural/agricultural development patterns. This scaled-down bypass, along with local network additions, would provide a better transportation system at about half of the cost of the original plan. Furthermore, the revised project would likely happen sooner and be more sensitive to the region's history and environment.

One of the most important components of this project is an emphasis on a connected street network. As development occurs, a new street network will be built, adding routing options for local traffic and minimizing pressure on Route 31. This new network will include sidewalks and other amenities

to encourage pedestrian and bicycle movement throughout the area and increase connectivity. More direct routes between areas of housing, employment, and retail will also be provided. The partners are also initiating an access management plan to further enhance and manage the accessibility of future development in the area. Updating zoning codes will facilitate a better mix of land uses in the region, encourage development concentrated in the centers, and increase tax ratables overall. Building the network over time while planning ahead for future development and incorporating context-sensitive solutions will ensure that this area can accommodate growth and maintain the character of the community.

Another key aspect of the project area is the South Branch of the Raritan River, a unique and valuable resource, and the acres of protected open space that extend for 22 miles through Hunterdon County. In addition to the natural resources, the South Branch area was the site of early settlement in this region, and surviving remnants of this period can be found throughout the area. The Route 31 Land Use and Transportation Plan promotes a recreational and historic greenway corridor to preserve and celebrate these historic and environmental resources.

The proposed "South Branch Parkway" in the context of natural resources, existing and proposed development, and a better connected street network.



Congestion, mobility, accessibility

10 congested locations

Traffic congestion in New Jersey has become an all too familiar sight to motorists using the state's highways, especially during peak periods; and the impacts in the forms of wasted time, economic loss, environmental degradation and a reduced quality of life are all too real. However, New Jersey is applying several strategies to deal with congestion. One of the congestion fighting techniques NJDOT has adopted in recent years is the identification of a "top 10" list of congested locations to receive special attention. There are other highway corridors that are just as congested as some of the ones listed below, but these locations were chosen in part because they offer good opportunities for coordinated approaches.

Our current "top 10" list (*not* in priority order):

1. Route 1, MP 5.2–12.8, Lawrence and West Windsor Townships, Mercer County

This 7-mile segment of Route 1 experiences significant congestion. There are multiple projects in various stages of development located within this stretch of roadway.

- Route 1 Quakerbridge Road area interim operational and safety improvements—Recently built improvements include removal of the traffic signal at Nassau Park, improvements at the Quakerbridge Road interchange, and extension of the auxiliary lane from the Route I-95/I-295 interchange to the Quakerbridge Mall exit. More improvements are being prepared.
- Route 1 from the Route I-95/I-295 interchange to Alexander Road and Route 1 Alternate at Franklin Corner Road—Longer-term studies are planned.
- Central New Jersey Bus Rapid Transit Study—NJDOT is supporting a study effort led by NJ TRANSIT to evaluate a possible "bus rapid transit" system in the Route 1 corridor. This innovative transit approach—a hybrid between traditional bus and light rail technologies—may offer the best opportunity for a public transit option in this area. A companion study, the Route 1 Regional Smart Growth Assessment, is also underway.
- Route 1, Penns Neck—NJDOT has completed the Environmental Impact Statement phase of work for this long-awaited project. The Final EIS includes a preferred alignment which will eliminate the traffic signal at Penns Neck.

2. Route 1 and 1&9, MP 28.25–39.45, Edison, Woodbridge, Rahway, Middlesex/Union Counties

A severe congestion problem is clearly evident within this 11-mile segment of Route 1 and 1&9 in Middlesex and Union counties. A variety of improvements are scheduled over the next five years and beyond.

- Route 1, Sec. 7L Pierson Avenue to south of Garden State Parkway, widening—This $35 million project is scheduled to be advertised for construction late in 2005.
- Route 1 North of Garden State Parkway to Green Street, bridge replacement and roadway widening—Under construction.
- Route 1&9, South of Route 1&9 and Route 35 interchange to Tappan Street, interchange replacement—This $25 million project is scheduled

to be advertised for construction in spring 2005.
- Route 1&9 1K, 3M, Production Way to East Lincoln Avenue, widening—Construction will begin in fall 2005.
- Route 1&9 new structure over the Rahway River—Under construction.

3. Route 3, MP 0.00–10.84, Hudson/Bergen/Passaic counties

The entire length of Route 3 is included in this corridor where significant traffic delays occur regularly. NJDOT has two major projects in the corridor.

The replacement of the Route 3 bridge over the Passaic River is one of NJDOT's "high-cost" bridge projects, with an estimated construction cost of $235 million. In addition to replacing structurally deficient infrastructure, this complex project will improve safety and traffic flow through the addition of auxiliary lanes and improved acceleration and deceleration lanes. Right-of-way acquisition is currently underway and construction is tentatively programmed for fiscal 2008 (funding issues facing high-cost bridges are discussed in another section).

The second major project in this area is the reconstruction of the Route 3 and 46 interchange and related interchanges at Valley Road and Notch and Rifle Camp Roads. This project is entering final design, with construction ($180 million) tentatively programmed for fiscal 2009.

Other improvements to Route 3 are expected to be made as part of the Hackensack Meadowlands redevelopment plan.

4. Route 4, MP 0.00–10.89, Bergen County

This congestion location incorporates the entire Route 4 corridor traversing several municipalities including Englewood Park, Fair Lawn, Paramus, River Edge, Hackensack, Teaneck and Fort Lee.

NJDOT has conducted a Route 4 Needs Assessment Study which has identified 23 potential improvements in the corridor. These improvements include 11 bridges (mostly carrying local roads over Route 4) which are in need of rehabilitation or replacement. Due to the very poor condition of many of these bridges, those projects will advance first. They are currently programmed for the "feasibility assessment" phase of work during fiscal year 2006. Potential projects to address the operational and capacity needs of the corridor will follow.

5. Route 9, Lakewood/Dover, MP 94.47-101.60, Dover/Lakewood Townships, Ocean County

This 7-mile section of Route 9 is an urban principal arterial that experiences serious traffic delays. It is one lane in each direction and the most severely congested segment of the 136-mile facility.

NJDOT is conducting an Environmental Impact Statement (EIS) for a possible dualization or lower-level improvements in the corridor. The high-level improvement could result in extensive environmental and right-of-way impacts (about 500 properties affected) and a construction cost of up to $200 million. A Smart Growth study has been incorporated into the EIS work to develop cost-effective solutions to the large travel demand in the corridor. Short-term improvements are being implemented at Cox Cro Road and at Pine and James Streets.

6. Route 17, MP 0.0–24.0, Bergen County

NJDOT is currently doing a study involving a 7.6 mile segment of Route 17 in Bergen County. The most congested segment (MP 10.2 to 11.9) is currently two lanes in each direction. Based on traffic and land-use trends NJDOT was looking to initiate a major EIS study intended to widen to 3 lanes in each direction. The study alone would cost several million dollars and the widening would cost $100 million plus and the ROW impacts would be devastating. This process would take a decade before Bergen County would see any congestion relief. NJDOT has initiated the process of working with Bergen County and local jurisdictions

to set up a template for future development and redevelopment that would preserve capacity on Route 17, by restructuring land use to higher density, better access management, and mixed use. Under this effort, we will provide planning assistance to local jurisdictions to help develop land-use planning alternatives which shift trips to non-automobile modes, or to keep those trips within the existing grid and off Route 17. It will also seek "low build" NJDOT solutions which are affordable, and which can be implemented much more quickly than EIS level improvements.

Other improvements to Route 17 are expected to be made as part of the Hackensack Meadowlands redevelopment plan.

7. Route 21, MP 0.0–4.10, City of Newark, Essex County

Major traffic delays are most common on the urban principal arterial link of Route 21 as it extends through the City of Newark south of the freeway section. Various connections such as Route I-280 and Routes 22 and 1&9 all provide access into downtown Newark.

Several extensive improvements to enhance mobility and safety for vehicular as well as pedestrian traffic are under construction:

- Raymond Boulevard to Route I-280 ($57 million)
- Lafayette Street to Raymond Boulevard ($16 million)
- Route I-280 to Passaic Street ($44 million)

Other major projects are in the study and development program:

- Newark Needs Analysis, Murray Street to Edison Place—A feasibility assessment/draft environmental impact statement study will begin shortly to determine how best to meet the transportation needs of the segment of Route 21 between the downtown improvements now under construction and the viaduct project recently completed.
- Newark Waterfront Community Access Study—A proposed project will provide a high-quality pedestrian linkage between the New Jersey Performing Arts Center area and the redeveloping Passaic River waterfront.
- Southbound viaduct, vicinity of Chester Avenue—This structure is under study for rehabilitation or replacement.

8. Route I-80/I-287 interchange area

This regional bottleneck has resulted in significant traffic congestion on the interstate system. Critical operational deficiencies are clearly apparent. This is the confluence area of two major interstate routes that serve high-volume, area-wide through traffic as well as providing direct access to commercial and industrial land uses in Denville, Parsippany-Troy Hills, Hanover and Morristown.

Improvements at the Route I-287/Route 24 interchange were recently completed.

More extensive improvements at the Route I-80/I-287 interchange will shortly begin final design. Tentatively programmed for construction in fiscal 2008 ($67 million), the improvements will include ramp improvements, acceleration and deceleration lane improvements, and pavement reconstruction.

9. Route I-295/I-76/42/55 interchange area

This is a major confluence area of several high volume interstate highways and limited access freeways. It services the Philadelphia/Atlantic City corridor commuter and recreational traffic. This is a critical regional bottleneck that experiences the worst congestion in South Jersey. Three major projects are underway to address the problems in this area:

- Route I-295 "Missing Moves," ramps between Route I-295 and Route 42 Environmental Document approval was achieved in September 2003. Preliminary Design was completed in September 2004. Construction currently programmed for fiscal 2006 ($74 million).
- South Jersey Urban Commuting Corridor, Advanced Traffic Manage-

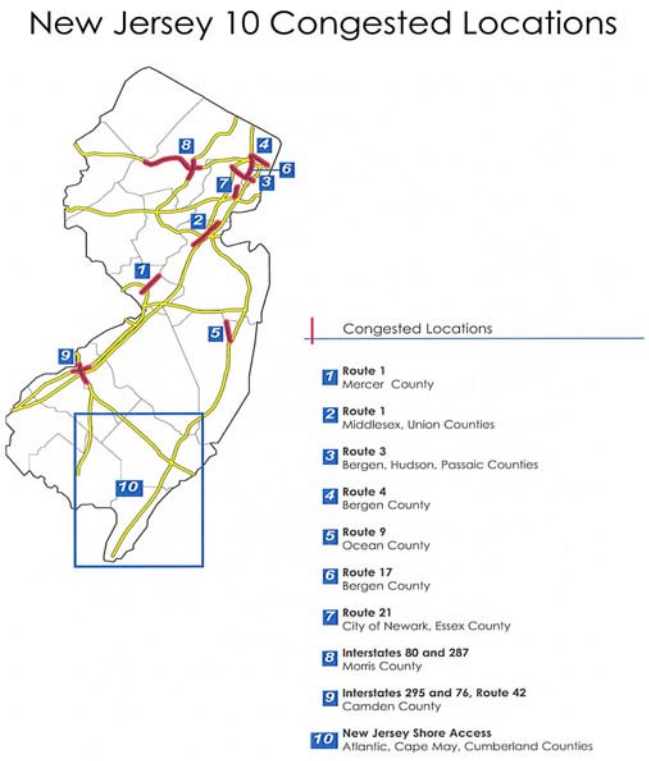
ment Systems (ATMS)/Advanced Traffic Information System (ATIS) including multi-modal components – Currently in concept development.

- Route I-295/I-76/42 "Direct Connection" – A major Environmental Impact Statement (EIS) study is now underway for a project to redesign this problem interchange. Technical Environmental Studies are currently being conducted for the 5 short listed alternatives. Draft EIS circulation is currently scheduled for 2006, Final EIS for 2007, Design for 2007-2009, and Construction for 2009-2012. Estimated construction cost is $150-300 million.

10. Shore Access, Atlantic and Cape May counties

During the summer months, severe traffic delays into the shore areas of Atlantic and Cape May counties have become a serious concern. Recreational traffic experiences heavy congestion on Routes 9, 30, 40/322, 47, 49, 50, 55, the Garden State Parkway and the Atlantic City Expressway. NJDOT has several projects in various stages of work to address bottleneck locations:

- Route 9, intersection at Crest Haven Road (CR 609), operational improvements—Under construction.
- Route 9, Breakwater Extension, proposed extension of Breakwater Road from Seashore Road to Route 9, intersection improvements and elimination of two existing railroad crossings—In preliminary design.
- Route 9, Tilton Road, Northfield—Construction programmed for fiscal 2006.
- Route 49, Cape May Branch Bridge replacement—Programmed to begin final design in fiscal 2006.
- Routes 47, 49, and 55 Shore Connection Study—In concept development phase. Short-term and mid-term improvements in various phases of development.
- Route 47/347, Route 9/550, and Route 9/Sea Isle Boulevard—Other intersection improvements in various stages of development.


New Jersey 10 Congested Locations
Congested Locations
1 Route 1 Mercer County
2 Route 1 Middlesex, Union Counties
3 Route 3 Bergen, Hudson, Passaic Counties
4 Route 4 Bergen County
5 Route 9 Ocean County
6 Route 17 Bergen County
7 Route 21 City of Newark, Essex County
8 Interstates 80 and 287 Morris County
9 Interstates 295 and 76, Route 42 Camden County
10 New Jersey Shore Access Atlantic, Cape May, Cumberland Counties

Congestion, mobility, accessibility

Major capacity increases

The most obvious solution to highway traffic congestion is to build new highways or to widen existing ones. In many parts of the country, new freeways and toll roads are spreading over the landscape at a rapid rate and urban areas are being torn apart with wider rivers of asphalt. This is not New Jersey's answer to the congestion problem. Relying on new highway construction does not promote the development of a sustainable transportation system with improved mobility and accessibility and the quality of life that New Jerseyans want.

Highway capacity increases (defined for this purpose as the construction of new through lanes, either through new highway construction or the widening of an existing highway) **do** make sense as a tool in some settings. NJDOT will continue to build new lanes in locations where this tool seems the most appropriate and where any negative land use consequences are controlled. In fact, in some cases new highway construction is actually a key element of new "Smart Growth" development.

Current NJDOT policy is to limit investment in highway capacity increases to no more than 4 percent of the total annual capital program. Projects which are currently programmed include:

- Route 1 and 1&9, Middlesex County—Completion of funding for the reconstruction and widening of parts of this heavily congested corridor. This project will support the economic viability of this dense urban area.
- Route 21, Newark—Completion of funding for the rebuilding of Route 21, McCarter Highway, in downtown Newark. This project is central to Newark's redevelopment plan.
- Route 206, Somerset County—Two construction contracts (including one on new alignment) will complete the widening of Route 206 south of Somerville. The bypass segment has been carefully designed in conjunction with local officials to avoid inducing sprawl and to promote Hillsborough Township's town center plan.

Congestion, mobility, accessibility

Relieving bottlenecks — highway operational improvements

One of the major causes of delay on the state highway system are bottlenecks on the system. These are pinchpoints where traffic is tied up, often due to competing traffic movements at intersections, inadequate ramps at freeway interchanges, and outdated traffic patterns, such as traffic circles. NJDOT classifies as "highway operational improvements" those projects which provide relief to these bottleneck locations. Highway operational improvements include:

- Redesign of freeway interchanges to facilitate movements from one road to another.
- Replacement of older traffic circles with safer, more efficient arrangements.
- Reconstruction of at-grade intersections, usually including separating turning movements and through movements.
- Low-cost, quick-turnaround intersection improvements, funded under the Congestion Relief (Fast Move) program.

The Blue Ribbon Commission report estimated that an investment of about $110 million a year over the next 10 years would complete the major projects and a significant number of smaller projects. Both the fiscal 2005 – 2007 capital program and the proposed fiscal 2006 – 2008 program have funded highway operational improvements at a significantly higher level, averaging closer to $200 million a year.

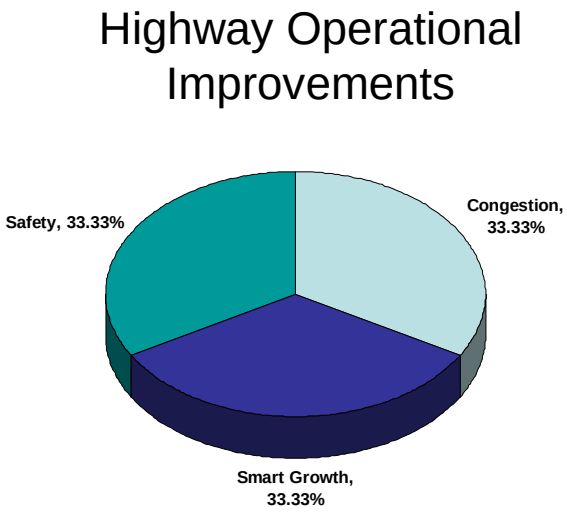
Some of the key bottlenecks NJDOT will be addressing in the next five years are:

- Route I-295/42/I-76 interchange –A severe congestion location, NJDOT will look to remedy the problem through a two-pronged approach. The first project to address the problem, the "Missing Moves" project, will add ramp connections to tie together some of the roads in the interchange area that were not previously connected. This project will go to construction in Fiscal 2006, at a cost of more than $80 million. The second project, the "Direct Connection," will address the lack of continuity between the mainline of Route I-295 north and south of the interchange area. This project is still undergoing an Environmental Impact Statement study, so the schedule and scope of work are not yet final. The ultimate cost of that project could be between $200 and $300 million.
- Route I-287/I-80 interchange – NJDOT will reconstruct the pavement on Route I-80 and will reconfigure ramps and make other improvements at the Route I-80/I-287 and Route I-80/202 interchanges. Although classified as a highway rehabilitation/reconstruction project, the work will also improve traffic flow. Final design is currently programmed to begin in fiscal year 2006, with construction in fiscal year 2008, at a cost of $67 million.
- Route I-78/Garden State Parkway interchange – This project will build new ramps to accommodate "missing moves" at this key interchange: Garden State Parkway northbound to Route I-78 westbound and Garden State Parkway southbound to Route I-78 eastbound. The work is being done under a partnership agreement between NJDOT and the New Jersey Turnpike Authority. Construction is currently programmed to begin in fiscal year 2007 at a cost of

approximately $70 million.

- Route I-295/38 interchange – The existing interchange between Route I-295 and Route 38 in Burlington County does not provide all the direct traffic movements between the two roadways. This project will provide for the construction of the missing moves via direct and semi-direct connector ramps at interchange 40. The adjacent signalized intersections at Marter Avenue and Briggs Road will be upgraded to provide relief to local roads. This project is expected to begin preliminary design in the spring of 2005. Concurrently, the county is undertaking a Smart Growth study to ensure that improvements at the interchange do not unintentionally spur sprawl development and worsen traffic congestion. Construction will be multi-year funded. The total construction cost is anticipated to range between $110 and $120 million.

NJDOT is currently advancing a total of 125 highway operational improvement projects in the capital program or the study and development program. A prioritization method is used to rank these projects, giving them numerical scores based on the congestion management system, the safety management system, and the State Development and Redevelopment Plan.



Congestion, mobility, accessibility

Intelligent transportation system

As stated on NJDOT's website, "Nothing is more frustrating to the traveler by automobile or bus than being delayed in traffic." A fully operable Intelligent Transportation System (ITS) can be a vital tool in the effective management of traffic, especially in a densely populated state like New Jersey. According to the Federal Highway Administration, metropolitan ITS systems on average have a cost benefit ratio of greater than 8 to 1. Freeway management systems can reduce accidents by 15 percent and increase capacity by 17 to 25 percent. By optimizing traffic flow, computerized traffic signal systems can also provide capacity improvements of 15 percent or more with a significant reduction in fuel usage and fumes generated, for an additional environmental benefit. A recent analysis of the Route 73 computerized traffic signal system in Camden County showed a reduction of up to 23 percent in the time needed to travel the entire 17-mile corridor during rush hour.

How can the use of technologies on highways help reduce congestion? Imagine a doctor trying to improve blood flow through a patient's clogged artery and compare it to an incident on the highway blocking traffic. One solution would be to perform coronary bypass surgery, or, in Intelligent Transportation System (ITS) terms create a "diversion route." Another solution is to remove the obstruction, or, in ITS terms, "dispatch emergency service personnel as soon as possible in order to remove the stalled or damaged vehicles and clear the roadway so that traffic can flow safely again." ITS can also assist in "preventive maintenance care." For example, variable message signs and highway advisory radio provide advance notice of pending trouble ahead, offering motorists opportunities to change their route and avoid unnecessary delays and hazardous conditions, or simply remind them to slow down and maintain safe distances so that crashes don't happen, similar to a doctor recommending exercise and a healthy diet. ITS provides NJDOT's traffic operations units with the tools they need to manage traffic effectively by alerting motorists of adverse conditions and notifying emergency personnel of incidents for quick response, on a 24-hour real-time basis, all to keep a heavily congested transportation body alive and kicking.

Consistent with NJDOT's goals, the deployment of ITS technology helps reduce traffic congestion, improve public health and safety associated with transportation, increase opportunities for local and regional economic development by improving mobility, and enhance the quality of life for towns and communities.

NJDOT began installing Intelligent Transportation System elements in 1992 and we now have some level of ITS infrastructure on about 90 miles of interstates and freeways and 235 miles of other state highways. This includes 300 miles of communication fiber, 163 cameras, 70 variable message signs, 168 speed detectors, 211 computerized signals, and 14 highway advisory radio transmitters.

Two high-tech traffic operations centers (TOCs), originally established in 1996, are the central focus for all transportation operations in the state. They use ITS infrastructure to manage the flow of traffic on the highways and to coordinate responses for traffic incidents. There is also a central dispatch unit co-located with the State Police and Department of Environmental Protection communications centers to assist

various operational units in responding to incidents. Approximately 7,000 incidents are reported to the TOCs every year. NJDOT is now working with the New Jersey Turnpike Authority to build a statewide fiber network and traffic operations center which will coordinate information with NJDOT's system, the Turnpike, and other transportation agencies. The network will be available in early 2005 and the new statewide center is expected to be under construction in 2006.

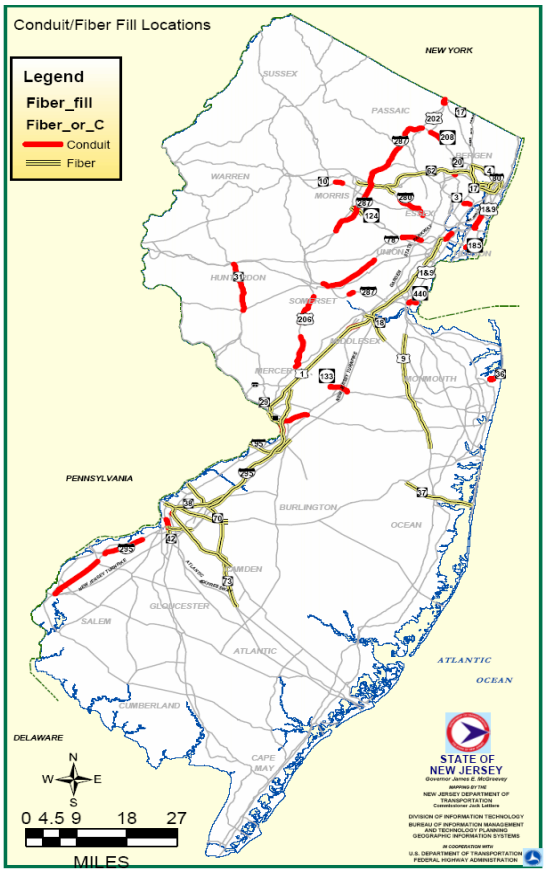
NJDOT's website (www.state.nj.us/transportation/commuter/trafficinfo/) provides real-time traffic information, including live camera views of actual highway conditions. The number of "hits" on this website has increased significantly. A 511 phone service to provide real-time traffic information is under development for deployment by mid-2005.

NJDOT also programs a small amount of funding annually for the "Smart Move" program of low-cost ITS improvements.

NJDOT's capital investment strategy for intelligent transportations system (ITS) improvements calls for expanding and improving the technical base and services available:

1. Expand instrumentation on interstates and freeways—The goal for instrumentation is to locate closed circuit cameras at every interchange and at every least every two miles for urban highways and every five miles for rural highways and to place variable message signs at all major approaches to interchanges. It is estimated that it will cost about $370 million over 10 years to complete this network.
2. Expand instrumentation on selected high-priority arterial highways—For arterial highways—major roads with signalized intersections—the goal is to install computerized traffic signal control systems on selected major corridors. The identification of corridors for this treatment will take place over the next several years. Installation of these systems on an additional 125 miles of roadway over the next ten years would cost approximately $80 million.
3. Upgrade and operate traffic control centers—Completing the network of traffic operation centers will cost about $8 million. The cost of operating these centers, which is currently a capital expense, will increase as they become fully operational with expanded instrumentation and coverage for the emergency service patrols and incident management response teams. Replacement and upgrade of older equipment and computer software will also require about $15 million over the next ten years.

Achieving these goals will require a total investment of about $960 million over the next ten years. Current and projected funding levels, within the limits of the resources currently available, are about $30 million a year.



Congestion, mobility, accessibility

Bicycle and pedestrian programs

One of New Jersey's improved bicycle and pedestrian facilities offer people a healthier, more environmentally friendly alternative to automobile travel. Opportunities for walking and biking will be a key element of the mobility and accessibility strategies of the vibrant communities New Jerseyans are working to build for the future.

NJDOT is committed to supporting better bicycle and pedestrian facilities throughout the state. The Statewide Bicycle and Pedestrian Master Plan (Phase 2 of which was completed in 2004) established a vision for the future:

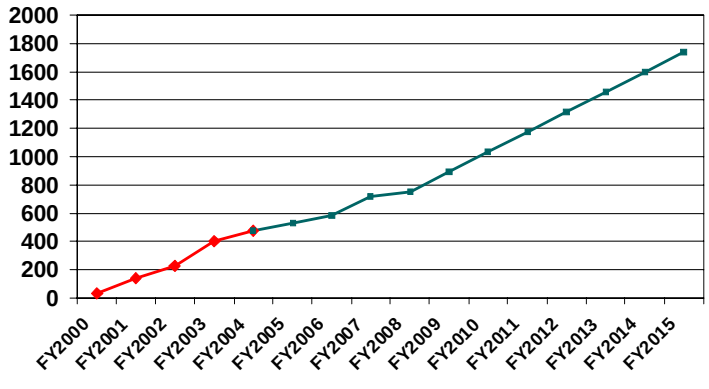
- New Jersey is a state where people **choose** to walk and bicycle.
- Residents and visitors are able to **conveniently** walk and bicycle with confidence and a sense of **security** in every community.
- Both activities are a routine part of the transportation and recreation systems and support **active**, **healthy** life styles.

The Master Plan also adopts 5 goals: Build the infrastructure; Improve access; Update policies, ordinances, and procedures; Educate and enforce; and Foster a pro-bicycling and walking ethic.

NJDOT currently invests about $20 million per year in bicycle and pedestrian programs. Most of these funds advance the Master Plan goal of building the infrastructure needed to support biking and walking. The central objective within this goal (as formally stated by the Legislature in NJSA 27:1B-22) is building 1,000 miles of bike paths over the next 5 years. Investments since 2000 have produced an average of about 88 miles per year of bike paths in New Jersey. As a result, slightly over 525 bike path miles will be completed through 2005. By 2010 it is anticipated that an additional 500 miles will be constructed, achieving the goal of 1,000 bike path miles. At current investment levels the total number of bike path miles is expected to reach over 1,700 miles in 2015.

The Statewide Bicycle and Pedestrian Master Plan, and much more information about biking and walking in New Jersey, can be found at http://njcommuter.com.

Bike Path Mileage
Actual and Projected



Goods movement

Freight movements and New Jersey's economy

New Jersey's multimodal goods movement network delivers the food we eat, the consumer products we buy, and is an essential underpinning to virtually every aspect of the State's economy. The network is characterized by extensive roadways, rail lines, major air and port complexes. The infrastructure itself developed over time and has had to adapt to changing freight transportation demands, distribution patterns, and equipment. Each year, numerous public and private sector entities work in unison to move over 600 million tons of freight into, out of, and through the State.

The critical role of the network is matched in scale by the challenges it now faces. Sustained and rapid growth in the number of imports under a more global economy coupled with rising expectations about reliability and on-time delivery have created heavy demands on our goods movement network. These demands will continue to grow at an increasing rate.

NJDOT actively seeks to address goods movement network challenges from a systems perspective by engaging in a wide array of activities. These include the advancement of projects through the traditional pipeline process; direct funding of rail projects through the short line rail assistance program; working with innovative multi-agency and public/private funding partnerships; collaborating with other transportation agencies as well as other public and private sector entities; and providing information to the public.

The goal of these activities is to improve the safety and efficiency of the transportation system, facilitate the efficient movement of goods, promote economic development and redevelopment consistent with smart growth, balance freight needs with other users of the network, and enhance the quality of life for New Jersey residents.

The key capital investment challenges for NJDOT for the next 10 years are advancing the Portway Program projects, working with Class 1 railroads to improve their infrastructure and capacity, providing support for short-line railroads, supporting maritime infrastructure needs, and advancing future projects identified through our on-going freight planning process.

NJDOT will be completing the first comprehensive Statewide Freight Plan in 2005. Additional projects and programs may result from the data and analysis produced. The cost associated with additional freight related projects has not been estimated. Funding will need to be addressed for projects arising within the 10-year time horizon.

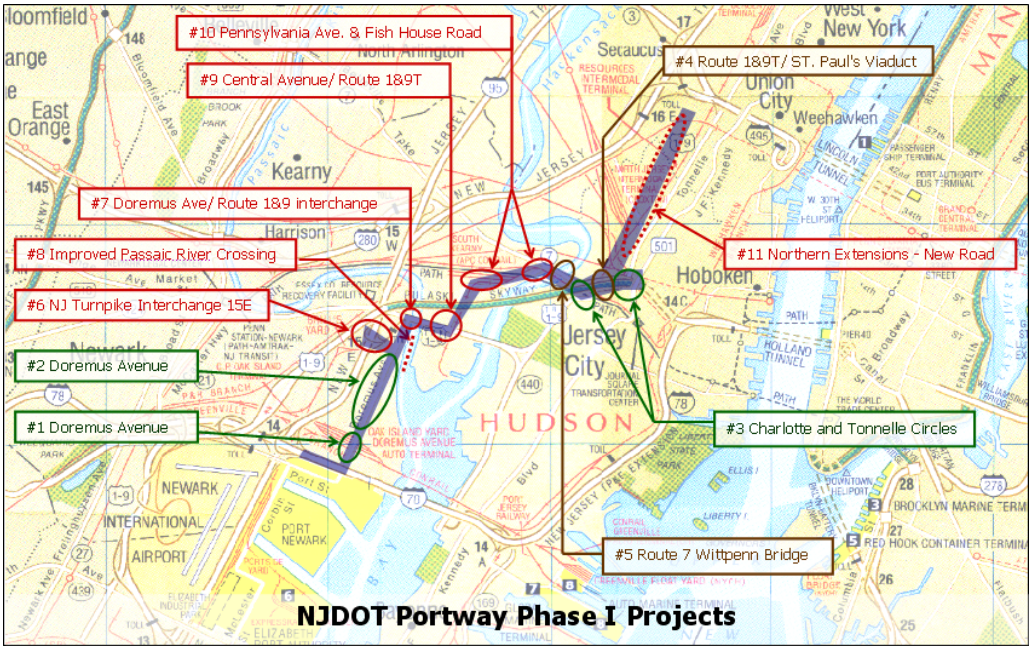
Goods movement

Meeting the need

NJDOT has four major programs targeted at improving goods movement in New Jersey:

- The Portway initiative
- The Rail Freight program
- The capital improvement partnership with Class 1 railroads
- The maritime program

The **Portway** program seeks to improve access to and between the Newark-Elizabeth Air/Seaport Complex, intermodal rail facilities, trucking and warehousing/transfer facilities and the regional surface transportation system. These facilities and their access routes are the front door to global and domestic commerce for New Jersey. The program has two elements: Phase One projects and the Portway Extensions Study. Phase One consists of 11 specific projects along a 7-mile long corridor: three completed (Doremus Avenue bridge and Doremus Avenue rehabilitation in Newark and Charlotte and Tonnelle Circles in Jersey City), two in final or preliminary design (Route 1&9T St. Paul's Avenue Bridge and Route 7 Wittpen Bridge), and six in feasibility assessment. Total cost of Phase One is approximately $1 billion, of which about half is made up of the St. Paul's and Wittpen bridges, two of our "high-cost" bridges. Current phases of work for the Portway projects are fully funded. Outyear needs are not. The Portway Extensions Study has issued a report (available on NJDOT's website at www.state.nj.us/transportation/portway/) identifying needs beyond Phase One and recommending extensions that facilitate goods movement operations (especially for containers) from northern New Jersey ports to their next destination.


#10 Pennsylvania Ave. & Fish House Road
#9 Central Avenue/ Route 1&9T
#4 Route 1&9T/ ST. Paul's Viaduct
#7 Doremus Ave/ Route 1&9 interchange
#8 Improved Passaic River Crossing
#11 Northern Extensions - New Road
#6 NJ Turnpike Interchange 15E
#2 Doremus Avenue
#1 Doremus Avenue
#3 Charlotte and Tonnelle Circles
#5 Route 7 Wittpenn Bridge
HUDSON
NJDOT Portway Phase I Projects

The **Rail Freight** program provides support for reconstruction and rehabilitation of the state's 14 short-line railroads. Following the reorganization of the Northeast railroads in the 1970s, Congress provided a modest program to assist the development of "short-line" railroads and the rehabilitation of branch lines, many of which had been neglected for years. New Jersey began its state-funded program to replace the federal program, which was phased out in the 1980s. In recent years, this program has been funded at a level of approximately $10 million a year from the Transportation Trust Fund. Projects are primarily selected from the State Rail Plan, which prioritizes the needs of short-line operations. Given the condition of the old railroad infrastructure currently in place, additional funding will be needed to meet growing reconstruction and rehabilitation requirements. The Commissioner can also select projects involving Class 1 railroads and projects which facilitate truck movements.

The **Class 1** (major) **railroads** serving New Jersey, in collaboration with NJDOT, have proposed a rail freight improvement plan to eliminate bottlenecks in the system and serve the growing needs of the economy. A total of $132 million in funding is required for all the identified improvements. NJDOT, the Port Authority of New York and New Jersey, and Class 1 railroads have entered into an agreement to fund the first phase of projects at a total cost of $50 million. A funding source for the remaining $82 million in projects has not been identified.

NJDOT's **Maritime Program** supports a number of activities vital to New Jersey's $50 billion maritime industry, including channel dredging, ferry infrastructure, the National Boating Infrastructure program, and the Port Inland Distribution Network. Most of the needs of these programs are met from other sources. The NJDOT capital program normally provides about $4 to $5 million per year to finance NJDOT's partnership role in these areas.

Aviation

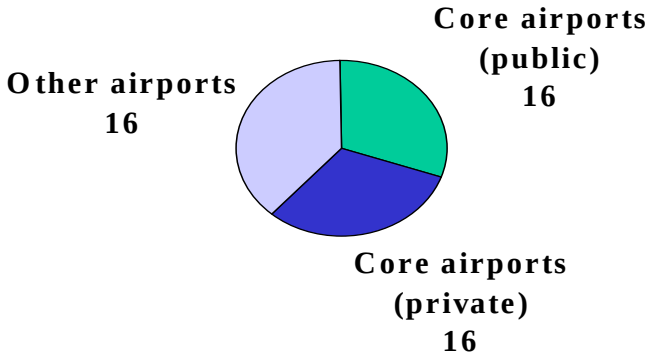
Meeting the needs of New Jersey's airports

New Jersey is home to a diverse and active system of airports which serve the state's passenger and cargo demands and are gateways to the regional, national, and global economy. The state's air carrier and general aviation airports (non-military, non-airline) play a key role in the retention and attraction of major businesses and industrial firms, especially high value and time sensitive industries such as finance, pharmaceuticals, and professional and corporate headquarters operations. High-tech and high-value businesses tend to locate their headquarters or plants in locations where airline and non-airline (i.e., general aviation) services are readily available. New Jersey's network of general aviation airports is an important element of the State's overall transportation system as well as a major contributor to its economy.

New Jersey has 48 public-use airports (including Newark-Liberty) and more than 4,200 based civil aircraft. A very unusual characteristic of New Jersey's public-use airports is that 30 of the 48 are privately owned. Of the 48 public-use airports, 32 are designated in the State Airport Systems Plan as "core" airports and handle nine percent of New Jersey based aircraft. Of the 32 core airports, 16 are in public ownership and 16 are in private ownership. Privately owned airports handle approximately 50 percent of New Jersey's 4,200 based aircraft.

Preserving New Jersey's existing general aviation core airport system is a deliverable "fix-it-first" and "smart growth" NJDOT initiative. Privately owned airports are often economically marginal and are frequently targeted for conversion to non-transportation purposes by residential and shopping mall developers. For several

New Jersey's 48 public use airports



decades New Jersey's public-use general aviation airports have been closing and converting to non-transportation purposes at a rate of about one every 18 months. The last public-use airport built in New Jersey was in 1983; since then 13 public-use airports have closed. This is an alarming contraction of New Jersey's public-use transportation infrastructure that must be arrested. Since it is imprudent to presume that any part of New Jersey's general aviation needs can or will be satisfied by the development of any new general aviation airports, we must prudently prepare to meet current and future general aviation service needs with and at New Jersey's existing public-use airports.

A state-aid program for New Jersey airports was established in 1983 with enactment of the New Jersey Airport Safety Fund. The state program was aimed at aiding privately owned airports that were not able to use federal airport aid. In 1983 the first critical priority of the state program was the repair and rehabilitation of runways and taxiways at privately owned public-use airports. The privately owned sector of the airport system was in a condition of general infrastructure collapse and the Safety Fund program did nothing less than save New Jersey's privately owned airport system. The state program was initially financed in the 1980s by the imposition of a two-cent tax on aviation fuels and the consolidation of un-refunded motor fuels tax and minor existing aviation fees. This created a revenue stream modestly over $1 million a year. The program is now funded at a typical level of about $7 million from the Transportation Trust Fund.

For several decades, the Federal Aviation Administration has provided capital aid to New Jersey airports. Federal funds have been used almost exclusively at publicly owned airports due to grant restrictions which complicate federal fund use at privately owned public use airports. In recent years federal apportioned aid to New Jersey general aviation airports has been funded at a level of $5 plus million dollars. This amount of apportioned aid is supplemented by discretionary aid, amounts of which may vary considerably. Federal airport aid is administered directly by the Federal Aviation Administration and airports apply directly to the FAA for Federal airport funding. NJDOT supports federal projects by providing at least half of the local sponsor match.

Preserving and rehabilitating existing airport infrastructure is also consistent with NJDOT's overall "fix-it-first" and "smart-growth" transportation policies. A significant land-use benefit of preserving existing general aviation airports is that it prevents their conversion to sprawl-inducing commercial and suburban developments. Airport preservation is done either by outright public purchase or by purchase of airport development rights (modeled after farmland preservation programs). New Jersey is the only state with an airport development rights purchase program. New Jersey's program has captured national attention, and development rights purchase is being discussed for national inclusion in the next FAA Federal Airport aid reauthorization bill.

NJDOT is actively involved in airport preservation, which is a constant threat as various privately owned public-use airports consider conversion to non-airport use. Since 1998, with a combination of federal, state and local funds, the following airports have been preserved:

- Greenwood Lake Airport – outright purchase by NJDOT
- Trinca Airport – outright purchase by Green Township
- Lincoln Park Airport – purchase of development rights by NJDOT
- Central Jersey Regional Airport – purchase of development rights by NJDOT

- Camden County Airport-
- purchase of development rights by NJDEP
- South Jersey Regional Airport-outright purchase by NJDOT

Administrative initiatives and airport owner discussions are currently underway at the following airports, which may result either in outright purchase or in purchase of development rights, with a combination of federal, state, and local funds:

- Monmouth Executive (Allaire) Airport – potential purchase by county
- Solberg Airport – potential purchase by municipality
- Sussex County Airport – purchase of development rights
- Blairstown Airport – purchase of development rights
- Sky Manor Airport – purchase of development rights
- Alexandria Airport - purchase of development rights
- Trenton-Robbinsville Airport - purchase of development rights

A critical rehabilitation priority is increasing the ground aircraft storage/parking capacity of airports. There is a severe shortage of quality aircraft storage/parking space. Many aircraft owners/users cannot utilize airports of their first, second, or even third choice because of a shortage of long-term aircraft parking and storage space. There is not a single vacant t-hanger space in the entire state of New Jersey. The waiting list for simple outside aircraft tie-down parking space at some airports exceeds 3 years. This crisis must be addressed.

Ongoing programs of about $12 million a year (not including federal or State discretionary funds for special projects), plus a $200 million need spread out over 10 years for core airport system preservation and rehabilitation, yields a total ten-year need of $340 million, of combined State and federal funds (not including federal discretionary funds for special projects).

Local aid

Meeting the needs of counties and municipalities

NJDOT's capital program provides significant state and federal funding to meet the needs of counties and municipalities.

The $145 million state aid to municipalities consist of three separate programs:

The County Aid Program is $67.5 million. These funds are allotted to New Jersey's 21 counties by a formula that takes into account county road mileage and population. Each county develops an Annual Transportation Program (ATP) that identifies projects to be undertaken and their estimated cost. Projects may be improvements to public roads and bridges under county jurisdiction, public transportation or other transportation related work. Upon review and approval of the ATP, NJDOT provides up-front funding for the full amount of the county allotment. Approximately 100 county highway and bridge projects are funded each year.

The Municipal Aid Program is $67.5 million.

a) **$59.979 million** is appropriated for municipalities in each county based on a formula that takes into account municipal road mileage within the county and county population. Then, these funds are allotted to individual projects within various municipalities through a competitive application based process. The funds can be used for transportation improvements under municipal jurisdiction and typically include road improvement projects such as resurfacing, rehabilitation or reconstruction and signalization.

b) **$5.0 million** is allotted to municipalities that qualify for Urban Aid under NJSA 52:27D- 178 et seq.

c) **$2.521 million** is allotted to Jersey City and Newark subject to review and approval of an Annual Transportation Plan. This allocation is ensured at a level not less than their combined total of 1984 apportioned Federal Aid Urban System Funds and state match including their portion of any non-attributable funds made available to Small Urban Areas.

More than 400 Municipalities are allocated funding for municipal projects each year.

All 566 municipalities may apply for Municipal Aid. Projects may be improvements to public roads and bridges under municipal jurisdiction. Applications are solicited, evaluated and rated by NJDOT staff. The results are presented to a Screening Committee comprised of municipal engineers and the staff of the Division of Local Aid and Economic Development. The Committee evaluates the projects and makes recommendations to the Commissioner for approval. NJDOT will pay 75% of the award amount or the allotment, whichever is less, at the time that the award of construction is approved

The Discretionary Aid Program is $10.0 million or 10% of the total State Aid Program subject to the annual appropriation by the Legislature These funds are established to address emergent or regional needs throughout the State. Any county or municipality may apply at any time. These projects are approved at the discretion of the Commissioner. Approximately 50 to100 projects are funded each year.

Other programs funded by the New Jersey Transportation Trust Fund include:

- Bicycle Projects, Local System Program—To promote alternate modes of transportation. These funds are available for local projects that will result in

either the creation of a new, independent bicycle facility or in making an existing roadway bicycle compatible. Approximately 50 projects are funded each year.

- Safe Streets to Schools Projects, Local System Program—To fund projects that improve safety for school children walking or bicycling to school. The program focuses on projects that create safer walkways and bikeways, safer street crossings, and to improve motorists' awareness of school children. Approximately 50 projects are selected each year.
- Local Aid for Centers of Place—Available to those communities that qualify as approved Centers of Place through the State Development and Redevelopment Plan and also certain Pinelands Communities as determined by the Pinelands Commission. Funds are available for non-traditional transportation improvements that advance municipal growth management objectives. Approximately 10 projects are funded each year.
- Local Aid for Designated Transit Villages—Provides funds to those communities that have been selected for inclusion in the Transit Village Program. The program focuses on projects in a community that plans and encourages mixed-use redevelopment near passenger transportation facilities. Transportation initiatives may include bike paths, sidewalks, streetscaping and signage.

There are also several federally funded programs that provide assistance to counties and municipalities:

- Transportation Enhancement Program—Provided through TEA-21 to support non-traditional transportation projects whose objectives support more livable communities, enhance the travel experience, and promote new transportation investment partnerships. The program focus is on transportation projects designed to preserve and protect environmental and cultural resources and to promote alternative modes of transportation. Typical projects would include: Bicycle and Pedestrian improvements, Scenic Beautification, Downtown Streetscapes, Historic Preservation of Transportation Related Buildings or Facilities and Environmental Mitigation to Highway Projects. (Annually approximately 40 projects are selected to participate in the program)
- Local Scoping Program—Project selection is done each year in cooperation with the metropolitan planning organizations (MPOs). The MPOs solicit projects from the 21 counties for inclusion in the program. This program provides federal funding for the purposes of administering to the environmental and engineering studies required by the National Environmental Policy Act (NEPA) as a part of every federal project. The purpose of this program is to identify any cultural or environmental issues that may or will require mitigation during the design and/or construction phases of the ensuing federal project. Projects that have successfully completed the Local Scoping process become eligible for federal funding for Design Engineering, Right of Way Acquisition and Construction through the Local Lead Program.
- Local Federal Lead Program—This program is done in cooperation with the MPOs on behalf of the 21 counties and certain large urbanized cities. The MPOs select the projects for inclusion in the program. Program funding is to provide for highway and bridge related projects on the county/local road system. Funding is available for engineering, right of

way acquisition and construction.

- Local Safety Program—Funding is provided to counties and municipalities for the improvement of potential safety hazards on local and county roadways. Projects will focus on crash prone locations and may include, but not be limited to, intersections and other road improvements including installation and replacement of guide rail and pavement markings to enhance pedestrian and vehicular safety. These safety improvements are construction ready and can be delivered in a short period of time.

More information on the Local Aid program can be found on NJDOT's website at www.state.nj.us/transportation/business/localaid/.

Although the funding provided to counties and municipalities through these various programs is significant, it falls far short of the demand. Statistics for the number of applications and funds requested under these programs, compared to NJDOT's ability to make awards, underscores the size of the unmet needs.

SOLICITED LOCAL AID PROGRAMS

CURRENT STATISTICS

As of March 2005

PROGRAM	# OF APPS RECEIVED	TOTAL AMT REQUESTED	# OF APPROVED APPLICATIONS	AMOUNT APPROVED
MUNICIPAL AID (05)	829	$198,500,000	408	$65,000,000
BIKEWAY (05)	90	$27,900,000	27	$4,000,000
SAFE STREETS TO SCHOOLS (05)	227	$37,700,000	45	$4,000,000
*CENTERS OF PLACE (04/05 combined)	68	$26,800,000	28	$5,000,000
TRANSIT VILLAGE (05)	6	$1,593,000	4	$1,000,000
TRANSPORTATION ENHANCEMENTS (Federal) (04)	205	$128,300,000	27	$10,000,000
TOTALS	1425	$420,793,000	539	$89,000,00

***Note that applications were not solicited for fiscal 05 because the program was funded only at $2 million. Additional grants were provided in fiscal 05 with the list of applications from fiscal 04. fiscal 04 funding for Centers of Place was $3 million.**

Capital program delivery

Supporting the capital program

Most of NJDOT's capital expenditures are programmed as individual projects in its capital program documents. Other expenditures are bundled together into programmatic line items, such as resurfacing (part of the roadway preservation program) and bridge deck preservation (part of the bridge preservation program). Still other expenditures are programwide in nature and cannot easily be classified by program type. These investments are collected together under the heading of "capital program delivery." The major items in this area are:

- Construction support—Includes on-call construction inspection contracts, State Police enforcement and safety services, and disadvantaged business enterprise support. Annual cost approximately $15 million.
- Right-of-way and utility support—Includes advance acquisition of right-of-way, legal cost for right-of-way condemnation, and utility reconnaissance and relocation. Annual cost approximately $7 million.
- Project scoping and design—Includes funding for consultant contracts for project scoping, preliminary design, and environmental assessment activities. Annual cost approximately $45 million.
- Planning and research—Includes the federally supported planning and research program and mandated data collection. Annual cost approximately $30 million.
- Program implementation costs—Includes funding for salaries and other administrative expenses directly related to developing and delivering the capital program. Annual cost approximately $85 million.
- Facilities and equipment—Includes acquisition of construction, safety, and maintenance equipment and funding for major repairs, rehabilitation, and replacement of NJDOT physical plant facilities. Annual cost approximately $16 million.
- Unanticipated expenses—Setaside for change orders and other unanticipated project expenses. Annual cost approximately $20 million.

NJDOT is committed to continuous improvement of its capital program delivery machinery. The newest initiative in this area—the Hyper-Build program—is described on another page. NJDOT will also need to plan for increased funding in specific areas, including facilities and equipment, which have historically been underfunded, and the implementation of new technology.

Capital program delivery

Hyper-Build

Designing and building a transportation project is a complex and often time-consuming task. The final design, right-of-way acquisition, and construction phases of the work may take years to complete. Even before final design can begin, earlier phases of work—concept development, feasibility assessment, and preliminary design—may also consume years. In these early phases, NJDOT staff seek to define the nature of the problem, to identify feasible solutions, to work with the community to ensure that a solution can be found that fits with local needs, to avoid or minimize any negative environmental consequences, and to carry out all the data collection and engineering studies that are needed.

For the past three years, NJDOT worked to find ways to streamline this process. There are now four distinct project development "pipelines" that tailor the phases of work to the needs of the project. Small projects which need only limited engineering support and have negligible community or environmental impacts are put through an accelerated "pipeline" that gets them into construction without unnecessary preliminary work.

NJDOT has recently announced a new initiative to improve the way transportation projects are conceived of, developed, and constructed. The concept is called "Hyper-Build" and is based on successful experiences to construct projects quickly in other states and on New Jersey's own direct experience with emergency replacement of the Friendship Creek Bridge on Route 70 in the summer of 2004. In each of these instances there was an urgent need to complete projects quickly and to minimize public inconvenience. In the case of the washout of Friendship Creek Bridge, a temporary bridge was provided in less than a week and the permanent structure was designed and built within a three-month period. The project was an overwhelming success as measured by any standard.

The idea of Hyper-Build is to approach the process for meeting transportation needs and solving problems with a strong sense of priority, urgency, and even a certain degree of impatience. Critical to the process is the concept of "project end date," the date by which substantial project construction must be reached to meet specified objectives. Successful implementation of the Hyper-Build philosophy will require strong support from the whole transportation community, including NJDOT staff, the Federal Highway Administration, transportation stakeholders, and members of the consulting engineering and construction industries.

Hyper-Build is not only delivering projects faster to construction through innovative engineering, but also constructing projects faster in order to reduce the impacts on the traveling public. In some cases, this may

involve trading off temporary inconvenience to the public through imposing short-term detours in exchange for construction efficiencies and faster project completions. It may also involve finding ways to limit project scopes and eliminating excessive internal reviews of project details. Developing projects from the beginning to minimize right-of-way needs, utility involvements, permitting issues, and community impacts is also an essential component of Hyper-Build.

The public will initially see Hyper-Build as a list of projects that get finished on accelerated schedules. This will help to build the confidence of both transportation professional and the general public. As the process takes hold and experience is gained, processes and approaches will be modified and more projects will be brought into the Hyper-Build approach. The end goal of the program is to implement dramatic improvements in the conception, development, and construction of transportation improvements benefiting the public.

Quality of life

Improving the natural and built environments

NJDOT recognizes that everything that is done to improve, operate, and maintain our state's transportation system has some effect on the natural and built environments. We are committed to going beyond mitigating any negative effects that our actions may have (which is the minimum legal requirement) and working to actually improve the quality of our natural environment and our communities. This commitment can be seen in some of the new approaches NJDOT has recently adopted, including Environmental Stewardship (assuming a positive responsibility toward protecting and improving the natural environment), Context Sensitive Design (working with communities to make transportation improvements fit with their vision), and Smart Growth (linking transportation planning and land-use planning). Although these themes are woven into the fabric of NJDOT projects in general, there are some specific capital investments that target quality-of-life issues. Most of these programs are quite small in size and could be increased if additional funding were available. These programs include:

- Air quality – NJDOT spends about $40 million per year of federal funding targeted for air quality improvements (the federal Congestion Mitigation and Air Quality program). Most of these funds are categorized into other programs, such as transportation demand management. NJDOT also provides about $75 million per year from this program (a federal highway program) to NJ TRANSIT, since improved transit is one of the best ways to improve air quality.
- Transportation Enhancements – This is a federal program which funds small-scale quality-of-life improvements. NJDOT makes these funds available to local communities based on an application process.
- Landscape – Small amounts of funding are made available to upgrade landscaping on our state highway. A pilot project for landscaping and streetscaping in an urban and suburban environment will soon be ready for construction on Route 82 in Union County.
- Scenic byways – NJDOT continues to support local community groups in identifying and planning for the protection and improvement of scenic byways in New Jersey.
- Noise protection – Several projects for noise mitigation are advancing in the study and development program.
- Corridor scenic preservation – NJDOT continues to fund a pilot program on Route 57 to protect scenic vistas, discourage suburban sprawl, and protect mobility by purchasing key parcels along the state highway.

- Ecotourism – Another small pilot program provides funding for transportation improvements that support local economies in rural areas through environmentally sensitive "ecotourism." The current pilot project is the development of a Delaware Bayshore Birding and Wildlife Trails (BWT) Guide, a collection of local driving loops that connect sites where people can go to view the area's wildlife and spend some time outdoors. The sites will be nominated by members of the community. The guides will be accompanied by brochures listing local businesses that encourage and recognize the importance of nature-based tourism.

Homeland security

Protecting our transportation system

Since 9/11, all of us have become alert to the threat of terrorist acts on American soil. NJDOT recognizes that part of its core mission is ensure that New Jersey's transportation system is protected as well as humanly possible from these threats. NJDOT has established an Office of Transportation Security to coordinate all state efforts for transportation security. This coordination includes a phased implementation of transportation security initiatives for all critical infrastructure and modes of transportation. The office coordinates regional transportation security planning efforts, project implementation, project financing and operations. To accomplish this, the office is working with other NJDOT staff, other agencies (including other state agencies, the Port Authority of New York and New Jersey, and NJ TRANSIT), private sector aviation, ferry companies, port operators, railroads, freight companies, academic institutions, and communities to develop and implement a statewide transportation security plan. The office also coordinates with all federal agencies having responsibility for homeland security and transportation security. NJDOT is programming only "startup" funding for various proposed programs at this time. As the statewide plan is developed, additional investment needs will be identified.

NJ TRANSIT
CAPITAL INVESTMENT STRATEGY (CIS)
MARCH 2005

EXECUTIVE SUMMARY

When it was established twenty-five years ago, NJ TRANSIT inherited a collection of bankrupt railroads and bus companies. The Corporation's initial capital programs focused on melding these disparate services into one system and improving reliability, after years of disinvestment by private enterprise.

The opening of Secaucus Junction in 2003 marked a key milestone in NJ TRANSIT's efforts to integrate the private sector services it inherited into a single, intermodal network.

The goal of NJ TRANSIT's Capital Investment Strategy (CIS) is to improve the reliability, frequency and geographic reach of this network to increase transit ridership, promote smart growth and drive the state's economy.

- First, the Ten-Year Capital Investment Strategy calls for continued investment in the state's transit infrastructure to achieve and maintain a state-of-good-repair. This improves reliability of the transit network and ensures continued satisfaction of existing customers. The CIS targets infrastructure rehabilitation, bus and rail equipment replacements and technology improvements to modernize customer information and fare collection systems.

- Second, there is a tremendous need to grow core transit system capacity to serve ambient market growth and new customers. As NJ TRANSIT approaches the end of an era characterized by investments to integrate its predecessor railroads into one rail system, capacity improvements are becoming more critical.

  Increasing rail capacity along the Northeast Corridor into Midtown Manhattan is the keystone of future capacity. This corridor, as no other, exemplifies the success of transit and its future potential. The Northeast Corridor necks down from four or more tracks to two tracks as it approaches Penn Station in Midtown Manhattan. This portion of track must be improved to accommodate more train service to Manhattan and throughout New Jersey, and to allow the number of rail lines providing direct service to Manhattan to increase above the current five lines.

  In addition to increased capacity of rail and bus right of way, the Capital Investment Strategy calls for expanded commuter parking and the creation of new regional intermodal park & rides.

- Finally, the CIS also calls for selective service expansions that work with and fully complement prior investments.

NJ TRANSIT's Capital Investment Strategy will guide transit investments in New Jersey for the next ten years. Implementing the CIS will deliver an improved transit system to the state, one of greater reach, reliability and level of service.

INTRODUCTION

Created by the Public Transportation Act of 1979, NJ TRANSIT was established to acquire, operate and contract for transportation service in the public interest. In 1980, NJ TRANSIT purchased Transport of New Jersey, the State's largest private bus company at that time. Between 1981-85, the services of several other bus companies were incorporated into NJ TRANSIT Bus Operations, Inc. On January 1, 1983, a second subsidiary, NJ TRANSIT Rail Operations, Inc. was launched to assume operations of commuter rail in the State after Congress ordered Consolidated Rail Corporation (Conrail) to cease its passenger operations. A third subsidiary, NJ TRANSIT Mercer, Inc., was established in 1984 when the agency assumed operation of bus service in the Trenton/Mercer County area. In 1992, following a full reorganization, all three subsidiaries were unified and operations were significantly streamlined.

NJ TRANSIT is the nation's third largest provider of bus, rail and light rail transit, providing services to major points in New Jersey, New York and Philadelphia. The agency operates a fleet of 2,027 buses, 776 trains and 65 light rail vehicles. NJ TRANSIT provides nearly 223 million passenger trips each year on 236 bus routes and 11 rail lines statewide and covers a service area of 5,325 square miles.

NJ TRANSIT also administers several publicly funded transit programs for individuals with disabilities, senior citizens and those living in the state's rural areas who have no other means of transportation.

NJ TRANSIT is committed to provide safe, reliable, convenient, cost-effective transit services to the people who live and work in New Jersey.

THE ROLE AND BENEFITS OF TRANSIT IN NEW JERSEY

Funding of public transportation is unique among public investments for its wide range of social and economic benefits. Perhaps first among these benefits is the integral role that public transportation plays in supporting the state's economy.

One of New Jersey's most important competitive advantages is its considerable transportation infrastructure. If goods and people cannot flow smoothly throughout the state, New Jersey's long-term economic prospects are considerably diminished. Public transportation is an important component of New Jersey's transportation system because it targets one of its greatest enemies: congestion.

Transit's role in the overall transportation network primarily has been one of demand-side management for highway trip growth. Transit provides the necessary additional peak period capacity to get people to work in the region's dense employment concentrations. Without transit, many of the region's jobs would be virtually inaccessible due to what would be intolerable levels of highway congestion.

Given the high cost of building new roads in densely populated New Jersey, it is less expensive to improve transit in select corridors. For example, if all of New Jersey's New York-bound commuters were to be accommodated on roads, eight more tunnels and two more bridges would need to be constructed across the Hudson. If all of the state's transit riders occupied cars on the Garden State Parkway instead of buses and trains, all lanes of the Parkway would be filled end to end.

Transit has been successful in fulfilling its role of reducing demands on the highway system. According to the 2000 Census, one out of every ten New Jersey workers uses public transportation to get to work, double the national average. In select corridors, like New Jersey crossings to Manhattan, transit's market share is over 80% (including commuter rail, bus, PATH and ferry). New Jersey has the second highest transit use of any state except New York, and is home to five of the top twenty transit cities in the country.

Looking forward, transit's role in accommodating trip growth in New Jersey is increasing. According to the 2000 Census, the percentage of New Jersey workers using transit is increasing for the first time in 40 years. As population increases result in greater trip growth, the transportation network must respond. If highway capacity expansion is constrained, public transportation systems become one of the few viable options for accommodating future trip growth.

In addition to accommodating commuters, public transportation is playing an increasingly important role in carrying off-peak and weekend trips. New Jersey's congestion problem is extending beyond the morning and evening weekday rush hours. Shore traffic, mall traffic and overall population density have resulted in a state where no time is safe from congestion. Yet congestion in these times threatens industries that are key to the state's economy, such as tourism and retailing.

Public transportation also plays an important role in promoting specific economic development. By their very nature, train stations and other transit hubs concentrate people into a limited area, creating localized markets for retailers and commercial enterprise. This concentration also allows for greater densities in economic development. The economics of large commercial buildings require access by transit to alleviate the real estate costs otherwise associated with parking. In Jersey City, for example, the number of parking spaces required for commercial development can be less than half that for suburban development, due to the city's access to transit. Also, in congested areas, transit provides access to a larger labor market, since workers can commute from greater distances.

Transit also increases local property values. In heavily congested New Jersey, easy access to public transportation results in high demand for area housing. For example, as NJ TRANSIT extended Midtown Direct service to Montclair in 2002, the town had the highest increase in property values of any municipality in the country. Transit can also benefit the local economy of a community, as Midtown Direct service demonstrated, by adding $60 million in disposable income to the towns served from new people moving in as a result of the new service to New York.

Beyond the benefits to the state's economy, transit investment also has social benefits. Public transportation provides an important safety net for those who cannot drive, whether due to age (both young and old), disability or for economic reasons. Almost 10% of New Jersey's households do not have access to a car. As New Jersey's population ages, more and more people in the state become transit-dependent. NJ TRANSIT provides an important transit service for those who cannot access the highway network.

Transit also promotes smart growth and improves the general quality of life in the communities it touches. Studies have shown that people prefer to live in dense, walkable communities with easy access to public transportation. People use transit because it's faster, more convenient and more pleasurable to use than other means of transportation. Transit builds neighborhoods, reduces urban blight and fosters economic development.

NJ TRANSIT TODAY

New Jersey's present rail and commuter bus systems primarily serve New York markets. There is an extensive local bus route network serving the state, focused more on areas where development is concentrated and areas with proportionately more transit dependent population. Over the past ten years, NJ TRANSIT's ridership grew by 30%, mirroring the growth in the State's economy over the same period.

The condition of the transit infrastructure and equipment is much improved from the days of private control, but significant deficiencies still remain. Increases in congestion on the state's highways have shifted auto users to the rails and express bus system, giving rise to severe crowding on the rail network, particularly into Manhattan, and negatively impacting the competitiveness of the bus network as well.

Past investments have focused on integration of what was a hodgepodge of privately controlled railroad and bus lines into a more modern and integrated transit network. As these investments come to fruition, the potential exists for a significant change in the makeup of transit riders in New Jersey.

PRESENT AND FUTURE DEMAND

Demographers predict that New Jersey's population will increase by 1.4 million between 2000 and 2020, or 16% according to the New Jersey Department of Labor. New Jersey's labor force is also forecast to grow by 0.9 million, or 21%. Since the majority of NJ TRANSIT's ridership is work related, it is possible that travel demand would grow by about 20% over this period.

However, the amount of transit ridership growth over the next 20 years will depend on the pattern and location of future household and employment growth, and the amount of congestion in the state. Implementation of smart growth principles, increased congestion and the aging of the population could significantly boost transit ridership.

A VISION FOR A DIFFERENT KIND OF TRANSIT SYSTEM

NJ TRANSIT's vision for the future of transit in the state is a transit network that provides integrated transit service across modes for commuters as well as travelers on business and recreational trips.

Increases in trip demand resulting from demographic trends indicate that NJ TRANSIT must change its services to better accommodate trips within New Jersey and to encourage more auto users to switch to transit. While the New York markets represent a strong and growing foundation of the state's transit ridership, there is an increased need to serve existing and new markets within the state for commutation, recreational and other purposes, especially to communities and major employment concentrations consistent with smart growth policies.

In order to make the vision a reality, the existing network must first be brought to a state-of-good-repair. Service reliability is paramount and is dependent on the condition of the infrastructure. If the backbone of a state-of-the-art, customer-friendly transit system is the existing railroad infrastructure, that infrastructure must be well maintained. Similarly, the condition of the highway and road network must also be well maintained to accommodate bus trips.

Investments must also be made to expand the core capacity of the existing transit system to allow for more frequent service. More parking and improved access are key elements of the makeover, as is better use of technology to produce a fare collection system that is faster and easier to use. Crowded stations and terminals must be expanded and modernized and rail and bus equipment must be overhauled or replaced. Most importantly, key bottlenecks, such as the area under the Hudson River, must be eliminated to allow more frequent service statewide. Finally, the geographic reach of the system must be expanded to make transit more accessible by a wider cross-section of customers.

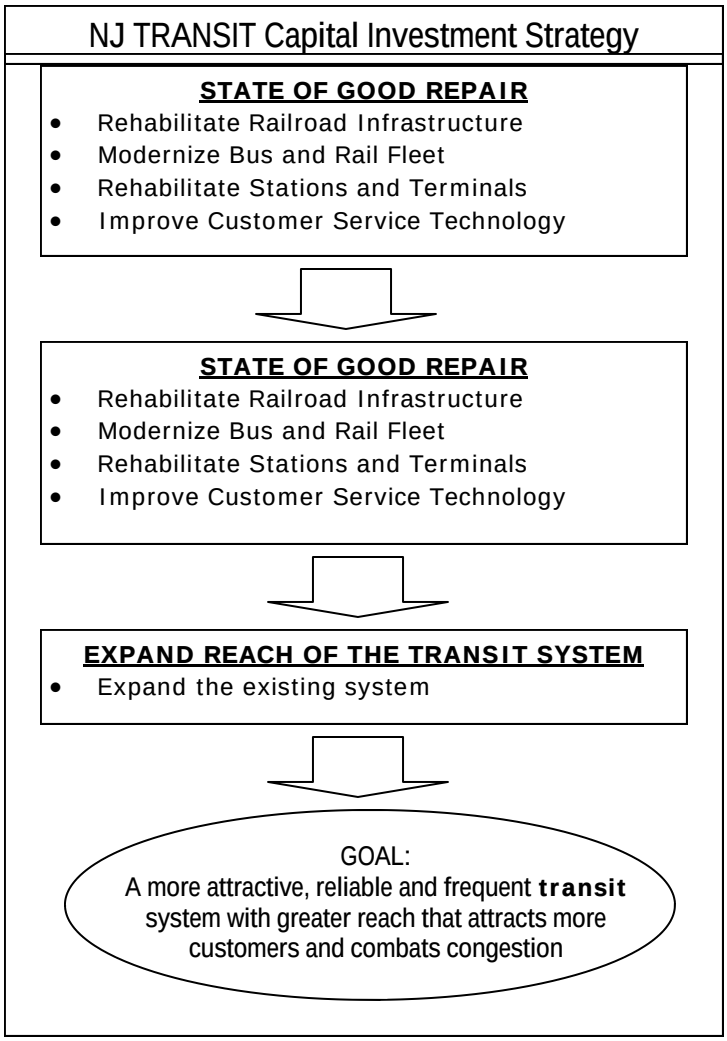
TEN-YEAR CAPITAL INVESTMENT STRATEGY OVERVIEW

The Ten-Year Capital Investment Strategy calls for continued investment in the state's transit infrastructure to achieve a state-of-good-repair and provide safe and reliable statewide transit service. The CIS allocates $6.66 billion dollars, or 35% of the total requested funding, to bring the system to a state-of-good-repair and maintain it at that level. It includes the funding necessary to improve NJ TRANSIT's infrastructure, customer service and new technology, and debt on equipment replacement.

There is a tremendous need to grow core transit system capacity to serve ambient market growth. As NJ TRANSIT approaches the end of an era characterized by investments to integrate its predecessor railroads into one rail system, capacity improvements are becoming more critical. $5.62 billion, or 30% of the Capital Investment Strategy will be used to increase core transit capacity frequency.

There is also a need for selective service expansions that work with and fully complement prior investments. $3.40 billion, or 18% of the Capital Investment Strategy will be used to expand off the existing core system. It includes the funding debt on light rail and system expansion program.

In addition, another $3.14 billion, or 17%, will be required to fund operating expenses.


NJ TRANSIT Capital Investment Strategy
STATE OF GOOD REPAIR
Rehabilitate Railroad Infrastructure
Modernize Bus and Rail Fleet
Rehabilitate Stations and Terminals
Improve Customer Service Technology
STATE OF GOOD REPAIR
Rehabilitate Railroad Infrastructure
Modernize Bus and Rail Fleet
Rehabilitate Stations and Terminals
Improve Customer Service Technology
EXPAND REACH OF THE TRANSIT SYSTEM
Expand the existing system
GOAL:
A more attractive, reliable and frequent transit system with greater reach that attracts more customers and combats congestion

NJ TRANSIT
TEN-YEAR CAPITAL INVESTMENT STRATEGY
(billions)

STATE-OF-GOOD-REPAIR		
Infrastructure SOGR	$ 3.9	
Customer Service and New Technology	$ 0.44	
Debt on Equipment Replacement	$ 2.32	
Subtotal	**$ 6.66**	35%
CAPACITY/FREQUENCY		
Increase Core System Capacity	$ 5.62	
Subtotal	**$ 5.62**	30%
EXPAND OFF THE EXISTING CORE SYSTEM		
Debt on Light Rail Expansion Projects	$ 1.1	
System Expansion Program	$ 2.3	
Subtotal	**$ 3.40**	18%
OPERATING SUPPORT	**$ 3.14**	17%
TOTAL:	**$18.8**	

STATE-OF-GOOD-REPAIR

The primary goal of the Capital Investment Strategy is to bring the system to a state-of-good-repair. The importance of system expansion projects pales in comparison with the need to maintain the existing system. NJ TRANSIT's existing transit riders rely on the transit system for a consistent level of service. NJ TRANSIT's surveys have shown that riders rank service reliability as one of their top concerns. State-of-good-repair correlates directly with reliable service, which, in turn, correlates directly with customers' decisions to use transit.

Much progress has been made in bringing the transit system to a state-of-good-repair. With such a large system, however, there is still much more work needed to achieve this state system wide. Once state-of-good-repair is reached, there is an ongoing need to maintain the system at that level.

Rehabilitate Railroad Infrastructure

NJ TRANSIT replaces components of the rail system regularly, based on each component's respective life cycle. "State-of-Good-Repair" is achieved when the infrastructure components are replaced on a schedule consistent with their life expectancy.

- Track – To ensure that it lasts 35 to 50 years, upgrading and replacement of rail, ties, switches and grade crossings must occur as part of a continuous program. Given NJ TRANSIT's 544.9 miles of main line track, 13 miles of track must be replaced every year.
- Structures – With more than 600 bridges, as well as various retaining walls, catenary and signal structures, a regular inspection program is followed to determine those bridges and structures in need of repair or replacement. Because NJ TRANSIT inherited an aged rail infrastructure from several bankrupt railroads, it has a backlog of bridges and other structures overdue for replacement.
- Electric Traction – With many electrified rail lines, overhead catenary wire and power substations must be maintained. Except for certain areas such as auxiliary wire, electric traction systems are at "state-of-good-repair."
- Signaling – Regular programmed maintenance and replacement of grade crossing warning systems, train operation signals as well as switching and interlocking signal devices is needed. NJ TRANSIT is also improving rail safety by installing Automatic Train Control (ATC) and Positive Train Stop (PTS) systems throughout the rail network. ATC systems continuously enforce speed limits for the locomotive engineer, while the PTS systems automatically stop a train before it travels through a stop signal
- Work Equipment – A continuous program of repair and replacement of this equipment is needed to properly maintain the rail system.

NJ TRANSIT Rail State of Good Repair Annual Capital Needs

Component	System Quantity	Life Expectancy	Annual Requirement
Undergrade Bridge Inspection – 5 yr cycle	585 Bridges	NA	117
Tie Decks	149 Open Deck Bridges carrying 45,000 Track Feet	30 years	1500 track feet
Bridge Painting	278 Steel Bridges carrying 66,000 Track feet	15 years	4400 track feet
Undergrade Bridge Rehab/ Replacement	541 in service	100 years	6
Overhead Bridges	108		2-3
ROW Projects	500 Culverts		2-3
Misc. Structures	Retaining walls, (19 miles) catenary and signal structures (over 2000)		2-3 projects
Catenary (structure/hardware trolley/Aux./main messenger wire)	240 miles	40 years	6 miles
Signal Power Lines	200 miles	40 years	5 miles
Substations	33 each	50 years	0.5 each
Controls & Navigation lights For Movable Bridges	13 each	30 years	0.3 each
Wayside Power	8 yards	20 years	0.5 yards
Electric Switch Heaters at Interlocking & Yards	770 each	20 years	35 each
Station Lighting	150 each	20 years	7 each

Note: Electric traction and signal power is generally in a state-of-good-repair except for auxiliary wire and substations at West End, South Amboy and Penn Station Newark.

Component	System Quantity	Life Expectancy	Annual Requirement
Interlocking	91	40 years	2
Grade crossing	320	40 years	8
Signal	1,222	40 years	30
Switch	751	40 years	18
Rail Replacement Equip.	25 pcs.	7 years	3 pcs.
Tie Replacement Equip.	40 pcs.	7 years	5 pcs.
Surfacing Equip.	21 pcs.	7 years	3 pcs.
Cranes	9 pcs.	15 years	1 pcs.
Backhoes, Excavators	24 pcs.	7 years	3 pcs.
Smaller Equipment	800 pcs .	5 years	5 pcs.

Component	System Quantity	Life Expectancy	Annual Requirement
Rail- main line	544.9 miles	35-50 years	13.0 miles
Rail- yards	52.9 miles	60 years	0.9 miles
Ties- main line	1,720,000 each	30-35 years	53,000 each
Ties-yard	115,000 each	50 years	2,300 each
Turnouts	743 each	35 years	20 each
Slip Switches	35 each	10-15 years	3 each
Road Crossings	348 each	17-20 years	22 each
Mitre Rails	80 each	20 years	6 each
Right-of-Way	System surfacing, Undercutting, Ballast Cleaning, Drainage Improvements.		

Modernize Bus and Rail Fleet

NJ TRANSIT must maintain its fleet of railcars, locomotives, buses and light rail vehicles in good operating condition. In the past three years, the agency has made great strides in replacing what was an aging bus fleet and in expanding its rail fleet. The Capital Investment Strategy provides for lease payments for these past procurements, the purchase of additional multilevel railcars, railcar overhaul and the replacement of older equipment.

- **New Equipment** – In order to retire equipment that has exceeded its useful live, NJ TRANSIT purchased 200 Comet V single level rail cars and 1,371 cruiser buses, 85 articulated buses and 33 new diesel locomotives.

  NJ TRANSIT will replace 42 F40/GP40 diesel locomotives, 200 NOVA A, and 650 NOVA B buses, 415 Metro B and 319 Metro D buses. NJ TRANSIT's 230 Arrow III self-propelled electric railcars will also require replacement within five to ten years.

- **Equipment Overhaul –** Useful life of rail equipment can exceed 25 years, and buses 12 years, if properly maintained and overhauled. Overhauls will be required on 800 cruiser buses, 76 CNG cruiser buses, and 148 Comet III and IV coaches. NJ TRANSIT is currently rehabilitating its fleet of 325 Nova B transit buses.

- **New Minibus Equipment –** The Capital Investment Strategy provides for the purchase of smaller buses to replace those that have exceeded their useful lives.

- **Private Carrier Improvement Program –** The Capital Investment Strategy calls for continued investment in private carrier buses. NJ TRANSIT replaces private carrier rolling stock as part of its regular equipment replacement program. Private carriers received over 500 cruiser buses as part of NJ TRANSIT's recent cruiser bus procurement.

- **Environmental Friendly Bus Purchases –** NJ TRANSIT continues to invest in new buses that have reduced emissions of air pollutants. All NJ TRANSIT transit, suburban, articulated and cruiser buses use either compressed natural gas or ultra-low sulfur fuel or are powered by hybrid-electric powerplants. In addition, NJ TRANSIT's recent procurement of articulated buses included soot filters as will all new NJ TRANSIT bus procurements.

Rehabilitate Bus Infrastructure

In order to ensure that our bus infrastructure is in a state-of-good-repair, NJ TRANSIT is committed to rehabilitating our bus facilities in a timely manner. The Capital Investment Strategy calls for rehabilitating approximately 10 of our 15 bus garages and the construction of a new garage in northern, N.J.

Rehabilitate Stations and Terminals

A key ingredient to attracting more riders to transit is improving the agency's "front door," its train stations and bus terminals. A number of NJ TRANSIT's train stations and bus terminals need improvement. The Capital Investment Strategy calls for significant funding to bring these facilities to a state-of-good-repair. In addition to attracting more people to transit, making train stations into showcases for the community improves quality of life in the towns and cities that host transit facilities.

Improvements will make train stations more accessible to people with disabilities, parents with children in strollers, and the growing population of senior citizens (65+), which is expected to increase by 39%, compared to a population growth of 16% through 2020.

Renew Technology

NJ TRANSIT will invest in advanced technology in order to improve customer service, enhance security and operate more cost-effectively. One of the critical systems that help advance these three goals is a smart card program. Although NJ TRANSIT has made great strides in improving interconnectivity of rail, bus and light rail services, ticket collection has not changed in over 100 years. If NJ TRANSIT is to become a system that serves more than commuters, it must have a fare collection medium that is more flexible, quicker and easier to use.

A smart card program will be implemented for the state's transit system. Riders will be able to board any bus, train or light rail vehicle using a common fare card and use it to transfer easily from bus to train and train to light rail. Fares could be deducted from the stored value on the card and the card's value could be replenished automatically from a credit card, like the EZ Pass system.

Smart card technology also makes back office operations more efficient, saving NJ TRANSIT administrative costs. The Capital Investment Strategy anticipates implementation of a smart card system along with other technology improvements designed to improve efficiency and reduce administrative overhead.

EXPAND CAPACITY, INCREASE FREQUENCY

Construct a new Trans-Hudson Rail Tunnel

The greatest bottleneck on NJ TRANSIT's rail network is the section of track between Newark and New York. Trains from five feeder lines converge on this section which constricts to two tracks, one inbound and one outbound through the nearly 100 year old tunnels beneath the Hudson River. Over half of all NJ TRANSIT rail riders pass through the existing tunnels, making the lines that serve New York Penn Station among the agency's highest performers. Demand for rail service to Midtown Manhattan has tripled during peak periods since 1983. As demand continues to increase, some time between 2010 and 2020, there will be insufficient capacity to provide for the trans-Hudson commute. The constraint on rail service to Midtown is also restricting intra-state rail service as well since the various lines converge before and after Newark on the approach to the Hudson River Tunnel.

NJ TRANSIT is taking steps to address capacity concerns in the trans-Hudson tunnels. It implemented a new signaling system to increase the throughput of the tunnel and is purchasing multilevel railcars. These efforts can only go so far, however. Once all of these interim efforts are exhausted, the only remaining option is to construct new trans-Hudson rail tunnels.

New tunnels will increase the number of trains into Manhattan, doubling trans-Hudson capacity and providing for a richer rail service in New Jersey. This added capacity will also improve the commuter bus system into Manhattan, by shifting some of the growth in bus riders to rail, thereby providing relief to the Express Bus Lane (XBL) and the Port Authority Bus Terminal (PABT) system. Forecasts for 2020 show that this shift is needed to keep bus travel times the same or better than today.

The Port Authority of NY&NJ is primarily responsible for the XBL and PABT. NJ TRANSIT is working with the Port Authority to provide the necessary trans-Hudson bus capacity on the Route 495 approach to the Lincoln Tunnel, the tunnel itself and the Bus Terminal. Among the issues to be addressed are: where to stage buses for outbound moves, their storage, and movement into the Bus Terminal in the evening.

The Capital Investment Strategy calls for other core capacity investments in the rail system. On the Northeast Corridor, new station capacity will have to be constructed in proximity to the Penn Station New York complex, along with new yard capacity to accommodate a larger rail fleet.

Expand Park & Ride Capacity

Access is an essential element of any transit system, particularly one constrained by insufficient parking capacity. Parking expansion improvements are targeted toward facilities with the greatest unmet demand.

Use of feeder shuttle buses will also reduce demand for parking and extend the geographic reach of transit.

NJ TRANSIT opened new stations with parking decks in Ramsey and Little Falls, offering 1,250 parking spaces at the Ramsey Route 17 Station and 1,500 parking spaces at the Montclair State University Station in Little Falls. The River LINE added 3,232 new parking spaces at various stations between Camden and Trenton. NJ TRANSIT also added over 900 parking spaces at 6 other stations.

The Capital Investment Strategy calls for park and ride improvements at the Edison Station (700 spaces), Route 23 Deck in Wayne (1,600 spaces), and Morristown Station Deck (118 spaces). Park and ride improvements at Howard Blvd. Station are also included in the CIS.

Expand Rail Fleet and Rail Yard Capacity

In order to improve frequency of service, additional equipment must be procured. NJ TRANSIT has taken delivery of 29 new electric locomotives and has ordered 100 Port Authority-funded multilevel railcars. Each multilevel car has up to 18% more seating than conventional single level coaches. 100 additional multilevel railcars will be needed to expand trans-Hudson rail capacity to meet demand in this decade. With the order of the additional multilevel cars, NJ TRANSIT will have sufficient rail equipment on hand to meet its needs for the next five years.

With the increase of rail fleet, NJ TRANSIT is faced with having to provide additional facilities to store and maintain rail equipment. In March 2004, NJ TRANSIT opened a new facility located in Falls Township, PA to accommodate rail equipment on the Northeast Corridor. When the second phase of the facility is completed, NJ TRANSIT will have the capacity to store and maintain up to 250 rail cars.

The Capital Investment Strategy calls for additional rail crew quarters, pedestal tracks/yard improvements, and the construction of S&I facility.

Coordinate Bus and Highway Investments to Improve Bus Service

Bus operations are severely impacted by highway congestion. NJ TRANSIT and NJDOT are working to ensure that highway improvements make bus service quicker and more reliable.

EXPAND REACH OF THE TRANSIT SYSTEM

Expand off the Existing System

The Capital Investment Strategy also provides for a limited number of system expansions. These expansions build off the current rail and light rail system in ways that improve efficiency of the network and expand the number of destinations for both existing riders and new riders.

Several projects are currently being advanced through the federally prescribed planning process for possible future investment. They are:

- Hudson Bergen Light Rail Extensions
- Bergen-Passaic Rail Line
- Union County LRT
- Lackawanna Cut-Off
- Monmouth-Ocean-Middlesex (MOM)
- West Shore Line
- West Trenton Line
- New York, Susquehanna and Western (Hawthorne west)

It is expected that they will be through that planning process and able to be implemented within this ten-year period. These projects to varying degrees will increase ridership, geographic coverage and address other needs. The CIS anticipates the advancement of some of these projects.

Planning efforts are also underway for other projects, such as a bus rapid transit system for the Greater Princeton Area and rail service to the NJ Sports Complex and surrounding area.

Critical to advancing the projects listed above are how well they complement NJ Transit's core system and their ability to attract new riders. A few of these projects, such as the West Shore Line, West Trenton Line, Lackawanna Cut-Off and Monmouth-Ocean-Middlesex, fulfill their full potential only if capacity is added to the Northeast Corridor, a new tunnel is built under the Hudson River, and station capacity is added in New York City.

NJ TRANSIT is prepared to advance portions of these projects that meet these general criteria:

- Meet FTA requirements – necessary to be eligible for federal funding
- Generates sufficient ridership – new riders, not just transfers from other transit services which significantly reduces air pollution, congestion and improves accessibility

- Generates sufficient revenue – the combination of farebox and any other possible revenue sources covers enough of the operating costs
- Physically feasible – project can be constructed in accordance with applicable codes and design standards
- Operationally feasible – operating plan makes practical sense and can be implemented
- Benefit/Cost ratio – the projected public benefits exceed the capital and operating cost

Because transit requires concentrations of activity, it almost always is consistent with Smart Growth. However, attention must be paid to whether proposed expansion of transit services will promote development that is inconsistent with the state's policies concerning Smart Growth.

CONCLUSION

The investments outlined in The Capital Investment Strategy will deliver a substantially enhanced transit system, one with greater reach and richer and more reliable service.

- Continued investment in transit promotes economic development by bringing more of the state's residents to their places of employment and by making it more attractive for businesses to locate in the Garden State.

- It promotes the principles of smart growth by connecting train stations and transit hubs to the communities and businesses that they are a part of – such that transit can serve as an anchor for commercial development in an attractive and livable environment.

- It ensures that the existing transit system achieves a state of good repair.

- It combats congestion by targeting sound and attractive transit alternatives in highway corridors with chronic traffic conditions.

As NJ TRANSIT implements its Capital Investment Strategy, it will attract more people to use transit and encourage those who already use the system to use it more frequently and for more purposes. When transit service becomes more frequent and reliable, and offers more destinations that people want to go to, people will begin to think of using transit for more than simply commuting to work. Implementing the Capital Investment Strategy will make New Jersey's communities more livable, its roads more tolerable and its businesses more profitable. The Capital Investment Strategy will deliver the kind of transit system that New Jersey needs to prosper in the 21st Century.

ASSEMBLY, No. 3414

STATE OF NEW JERSEY

211th LEGISLATURE

INTRODUCED OCTOBER 18, 2004

Sponsored by:
Assemblyman JOHN S. WISNIEWSKI
District 19 (Middlesex)
Assemblyman PETER J. BIONDI
District 16 (Morris and Somerset)

SYNOPSIS

Restores fiscal integrity and enhances funding to Transportation Trust Fund.

CURRENT VERSION OF TEXT

As introduced.

AN ACT concerning the funding of transportation projects and the New Jersey Transportation Trust Fund Authority, creating a Financial Policy Review Committee, supplementing P.L.1984, c.73 (C.27:1B-1 et al.) and amending various parts of the statutory law.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. (New section) This act shall be known and may be cited as the "Transportation Trust Fund Fiscal Integrity Restoration and Enhancement Act."

2. Section 3 of P.L.1984, c.73 (C.27:1B-3) is amended to read as follows:

3. The following words or terms as used in this act shall have the following meaning unless a different meaning clearly appears from the context:

a. "Act" means this New Jersey Transportation Trust Fund Authority Act of 1984, as amended and supplemented.

b. "Authority" means the New Jersey Transportation Trust Fund Authority created by section 4 of this act.

c. "Bonds" means bonds issued by the authority pursuant to the act.

d. "Commissioner" means the Commissioner of Transportation.

e. "Department" means the Department of Transportation.

f. "Federal aid highway" means any highway within the State in connection with which the State receives payment or reimbursement from the federal government under the terms of Title 23, United States Code or any amendment, successor, or replacement thereof, for the purposes contained in the act.

g. "Federal government" means the United States of America, and any officer, department, board, commission, bureau, division, corporation, agency or instrumentality thereof.

h. "South Jersey Transportation Authority" means the public corporation created by section 4 of P.L.1991, c.252 (C.27:25A-4) or its successor.

i. **[**"New Jersey Highway Authority" means the public corporation created by section 4 of P.L.1952, c.16 (C.27:12B-4) or its successor.**]** (Deleted by amendment, P.L. , c. (now before the Legislature as this bill.)

j. "New Jersey Turnpike Authority" means the public corporation created by section 3 of P.L.1948, c.454 (C.27:23-3) or its successor.

EXPLANATION - Matter enclosed in bold-faced brackets [thus] in the above bill is not enacted and intended to be omitted in the law.

Matter underlined thus is new matter.

k. "Notes" means the notes issued by the authority pursuant to the act.

l. "Public highways" means public roads, streets, expressways, freeways, parkways, motorways and boulevards, including bridges, tunnels, overpasses, underpasses, interchanges, rest areas, express bus roadways, bus pullouts and turnarounds, park-ride facilities, traffic circles, grade separations, traffic control devices, smart highway technology, the elimination or improvement of crossings of railroads and highways, whether at grade or not at grade, bicycle and pedestrian pathways and pedestrian and bicycle bridges traversing public highways and any facilities, equipment, property, rights of way, easements and interests therein needed for the construction, improvement and maintenance of highways.

m. "Public transportation project" means, in connection with public transportation service, passenger stations, shelters and terminals, automobile parking facilities, ferries and ferry facilities, including capital projects for ferry terminals, approach roadways, pedestrian accommodations, parking, docks, and other necessary land-side improvements, ramps, track connections, signal systems, power systems, information and communication systems, roadbeds, transit lanes or rights of way, equipment storage, pedestrian walkways and bridges connecting to passenger stations and servicing facilities, bridges, grade crossings, rail cars, locomotives, motorbuses and other motor vehicles, maintenance and garage facilities, revenue handling equipment and any other equipment, facility or property useful for or related to the provision of public transportation service.

n. "State agency" means any officers, department, board, commission, bureau, division, agency or instrumentality of the State.

o. "Toll road authorities" means and includes the New Jersey Turnpike Authority**[**, the New Jersey Highway Authority**]** and the South Jersey Transportation Authority.

p. "Transportation project" means, in addition to public highways and public transportation projects, any equipment, facility or property useful or related to the provision of any ground, waterborne or air transportation for the movement of people and goods including rail freight infrastructure.

q. "Transportation system" means public highways, public transportation projects, other transportation projects, and all other surface, airborne and waterborne methods of transportation for the movement of people and goods.

r. "Permitted maintenance" means, in relation to public transportation projects, direct costs of work necessary for preserving or maintaining the useful life of public transportation projects, provided the work performed is associated with the acquisition, installation and rehabilitation of components which are not included in the normal operating maintenance of equipment and facilities or

replaced on a scheduled basis. The work shall ensure the useful life of the project for not less than five years and shall not include routine maintenance or inspection of equipment and facilities that is conducted on a scheduled basis. This definition shall not apply to the term "maintenance" as used in subsection l. of this section. For purposes of this subsection, "permitted maintenance" means, in relation to public highways, the direct costs of work necessary for preserving or maintaining the useful life of public highways, provided the work is not associated with the regular and routine maintenance of public highways and their components. The work shall ensure the useful life of the project for not less than five years.

s. "Circle of Mobility" means an essential group of related transit projects that include (1) the New Jersey Urban Core Project, as defined in section 3031 of the "Intermodal Surface Transportation Efficiency Act of 1991," Pub.L.102-240, and consisting of the following elements: Secaucus Transfer, Kearny Connection, Waterfront Connection, Northeast Corridor Signal System, Hudson River Waterfront Transportation System, Newark-Newark International Airport-Elizabeth Transit Link, a rail connection between Penn Station Newark and Broad Street Station, Newark, New York Penn Station Concourse, and the equipment needed to operate revenue service associated with improvements made by the project, and (2) the modification and reconstruction of the West Shore Line in Bergen County connected to Allied Junction/Secaucus Transfer Meadowlands Rail Center; the construction of a rail station and associated components at the Meadowlands Sports Complex; the modification and reconstruction of the Susquehanna and Western Railway, as defined and provided in section 3035 (a) of the "Intermodal Surface Transportation Efficiency Act of 1991"; the modification and reconstruction of the Lackawanna Cutoff Commuter Rail Line connecting Morris, Sussex and Warren Counties to the North Jersey Transportation Rail Centers; and commuter rail service in the central New Jersey region terminating at the proposed Lakewood Transportation Center in Ocean County or other location, as determined by the Board of the New Jersey Transit Corporation, pursuant to a resolution of the board providing for the achievement of a consensus among the interested parties as to the direction of the proposed rail line; provided, however, that this 2000 amendatory act shall not be construed as affecting any priorities which may have been assigned to any other project in the Circle of Mobility.

(cf: P.L.2000, c.73, s.15)

3. Section 9 of P.L.1984, c.73 (C.27:1B-9) is amended to read as follows:

9. a. The authority shall have the power and is hereby authorized after November 15, 1984 and from time to time thereafter to issue its

bonds, notes or other obligations in principal amounts as in the opinion of the authority shall be necessary to provide for any of its corporate purposes, including the payment, funding or refunding of the principal of, or interest or redemption premiums on, any bonds, notes or other obligations issued by it, whether the bonds, notes, obligations or interest to be funded or refunded have or have not become due; and to provide for the security thereof and for the establishment or increase of reserves to secure or to pay the bonds, notes or other obligations or interest thereon and all other reserves and all costs or expenses of the authority incident to and necessary or convenient to carry out its corporate purposes and powers; and in addition to its bonds, notes and other obligations, the authority shall have the power to issue subordinated indebtedness, which shall be subordinate in lien to the lien of any or all of its bonds or notes. No resolution or other action of the authority providing for the issuance of bonds, refunding bonds, notes, or other obligations shall be adopted or otherwise made effective by the authority without the prior approval in writing of the Governor and the State Treasurer.

b. Except as may be otherwise expressly provided in the act or by the authority, every issue of bonds or notes shall be general obligations payable out of any revenues or funds of the authority, subject only to any agreements with the holders of particular bonds or notes pledging any particular revenues or funds. The authority may provide the security and payment provisions for its bonds or notes as it may determine, including (without limiting the generality of the foregoing) bonds or notes as to which the principal and interest are payable from and secured by all or any portion of the revenues of and payments to the authority, and other moneys or funds as the authority shall determine. In addition, the authority may, in anticipation of the issuance of the bonds or the receipt of appropriations, grants, reimbursements or other funds, including without limitation grants from the federal government for federal aid highways or public transportation systems, issue notes, the principal of or interest on which, or both, shall be payable out of the proceeds of notes, bonds or other obligations of the authority or appropriations, grants, reimbursements or other funds or revenues of the authority. The authority may also enter into bank loan agreements, lines of credit and other security agreements as authorized pursuant to subsection h. of section 6 of P.L.1984, c.73 (C.27:1B-6) and obtain for or on its behalf letters of credit in each case for the purpose of securing its bonds, notes or other obligations or to provide direct payment of any costs which the authority is authorized to pay by this act and to secure repayment of any borrowings under the loan agreement, line of credit, letter of credit or other security agreement by its bonds, notes or other obligations or the proceeds thereof or by any or all of the revenues of and payments to the authority or by any appropriation, grant or

reimbursement to be received by the authority and other moneys or funds as the authority shall determine.

c. Whether or not the bonds and notes are of the form and character as to be negotiable instruments under the terms of Title 12A, Commercial Transactions, New Jersey Statutes, the bonds and notes are hereby made negotiable instruments within the meaning of and for all the purposes of said Title 12A.

d. Bonds or notes of the authority shall be authorized by a resolution or resolutions of the authority and may be issued in one or more series and shall bear the date, or dates, mature at the time or times, bear interest at the rate or rates of interest per annum, be in the denomination or denominations, be in the form, carry the conversion or registration privileges, have the rank or priority, be executed in the manner, be payable from the sources, in the medium of payment, at the place or places within or without the State, and be subject to the terms of redemption (with or without premium) as the resolution or resolutions may provide. Bonds or notes may be further secured by a trust indenture between the authority and a corporate trustee within or without the State. All other obligations of the authority shall be authorized by resolution containing terms and conditions as the authority shall determine.

e. Bonds, notes or other obligations of the authority may be sold at public or private sale at a price or prices and in a manner as the authority shall determine, either on a negotiated or on a competitive basis. Every bond, or refunding bond, issued on or after the effective date of P.L.1995, c.108 (C.27:1B-25.1 et al.) shall mature and be paid no later than 21 years from the date of the issuance of that bond or refunding bond.

f. Bonds or notes may be issued and other obligations incurred under the provisions of the act without obtaining the consent of any department, division, commission, board, bureau or agency of the State, other than the approval as required by subsection a. of this section, and without any other proceedings or the happening of any other conditions or other things than those proceedings, conditions or things which are specifically required by the act.

g. Bonds, notes and other obligations of the authority issued or incurred under the provisions of the act shall not be in any way a debt or liability of the State or of any political subdivision thereof other than the authority and shall not create or constitute any indebtedness, liability or obligation of the State or of any political subdivision or be or constitute a pledge of the faith and credit of the State or of any political subdivision but all bonds, notes and obligations, unless funded or refunded by bonds, notes or other obligations of the authority, shall be payable solely from revenues or funds pledged or available for their payment as authorized in the act. Each bond, note or other obligation shall contain on its face a statement to the effect that the authority is

obligated to pay the principal thereof or the interest thereon only from revenues or funds of the authority and that neither the State nor any political subdivision thereof is obligated to pay the principal or interest and that neither the faith and credit nor the taxing power of the State or any political subdivision thereof is pledged to the payment of the principal of or the interest on the bonds, notes or other obligations. For the purposes of this subsection, political subdivision does not include the authority.

h. All expenses incurred in carrying out the provisions of the act shall be payable solely from the revenues or funds provided or to be provided under or pursuant to the provisions of the act and nothing in the act shall be construed to authorize the authority to incur any indebtedness or liability on behalf of or payable by the State or any political subdivision thereof.

i. The authority shall minimize debt incurrence by first relying on appropriations and other revenues available to the authority before incurring debt to meet its statutory purposes. Commencing on **[**the 90th day following the date of enactment of this 1995 amendatory and supplementary act**]** July 1, 2006, the authority shall not incur debt in any fiscal year in excess of **[**$650,000,000**]** 50 percent of the annual authorized amount reported for proposed projects in section 8 of P.L.1987, c.460 (C.27:1B-21.1), except that if that **[**permitted**]** authorized amount of debt, or any portion thereof, is not incurred in a fiscal year it may be incurred **[**in a subsequent fiscal year**]** until June 30 of the third fiscal year following the fiscal year in which it was authorized provided such incurrence of previously-authorized debt does not exceed a maximum of $1,000,000,000 in any three-year period.

If for any fiscal year the amount reported by the commissioner pursuant to subsection a. of section 8 of P.L.1987, c.460 (C.27:1B-21.1) does not exceed the authorized amount permitted therein but the total amount appropriated from the revenues and other nonfederal funds of the authority for projects listed in the appropriations act pursuant to section 21 of P.L.1984, c.73 (C.27:1B-21) exceeds the maximum authorized annual amount for such appropriations established in section 8 of P.L.1987, c.460 (C.27:1B-21.1), the maximum principal amount of new debt that the authority is authorized to incur in that fiscal year or to carry forward in accordance with this subsection shall be reduced by an amount equal to the amount by which the appropriation exceeds the maximum authorized annual amount for appropriations. Any increase in this limitation shall only occur if so provided for by law. In computing the foregoing limitation as to the amount of debt the authority may incur, the authority may exclude any bonds, notes or other obligations, including subordinated obligations of the authority, issued for refunding purposes.

j. Upon the decision by the authority to issue refunding bonds

pursuant to this section, and prior to the sale of those bonds, the authority shall transmit to the Joint Budget Oversight Committee, or its successor, a report that a decision has been made, reciting the basis on which the decision was made, including an estimate of the debt service savings to be achieved and the calculations upon which the authority relied when making the decision to issue refunding bonds. The report shall also disclose the intent of the authority to issue and sell the refunding bonds at public or private sale and the reasons therefor.

k. The Joint Budget Oversight Committee, or its successor, shall have authority to approve or disapprove the sale of refunding bonds as included in each report submitted in accordance with subsection j. of this section. The committee shall approve or disapprove the sale of refunding bonds within 10 business days after physical receipt of the report. The committee shall notify the authority in writing of the approval or disapproval as expeditiously as possible.

l. No refunding bonds shall be issued unless the report has been submitted to and approved by the Joint Budget Oversight Committee, or its successor, as set forth in subsection k. of this section.

m. Within 30 days after the sale of the refunding bonds, the authority shall notify the Joint Budget Oversight Committee, or its successor, of the result of that sale, including the prices and terms, conditions and regulations concerning the refunding bonds, and the actual amount of debt service savings to be realized as a result of the sale of refunding bonds.

n. The Joint Budget Oversight Committee, or its successor, shall, however, review all information and reports submitted in accordance with this section and may, on its own initiative, make observations and recommendations to the authority or to the Legislature, or both, as it deems appropriate.

(cf: P.L.2001, c.258)

4. Section 21 of P.L.1984, c.73 (C.27:1B-21) is amended to read as follows:

21. a. There is hereby established a separate fund entitled "Special Transportation Fund." This fund shall be maintained by the State Treasurer and may be held in depositories as may be selected by the treasurer and invested and reinvested as other funds in the custody of the treasurer, in the manner provided by law. The commissioner may from time to time (but not more frequently than monthly) certify to the authority an amount necessary to fund payments made, or anticipated to be made by or on behalf of the department, from appropriations established for or made to the department from revenues or other funds of the authority. The commissioner's certification shall be deemed conclusive for purposes of the act. The authority shall, within 15 days of receipt of the certificate, transfer from available funds of

the authority to the treasurer for deposit in the Special Transportation Fund the amount certified by the commissioner, provided that all funds transferred shall only be expended by the department by project pursuant to appropriations made from time to time by the Legislature for the purposes of the act.

b. The department shall not expend any money except as appropriated by law. Commencing with appropriations for the fiscal years beginning on July 1, 1988, the department shall not expend any funds except as are appropriated by specific projects identified by a description of the projects, the county or counties within which they are located, and amounts to be expended on each project, in the annual appropriations act.

c. No funds appropriated, authorized or expended pursuant to this act shall be used to finance the resurfacing of highways by department personnel, where that resurfacing would require the use of more than 100,000 tons of bituminous concrete for that purpose in any calendar year, except that the commissioner may waive this provision when he determines the existence of emergency conditions requiring the use of department personnel for the resurfacing of highways, after the department has effectively reached the 100,000 ton limit.

d. In order to provide the department with flexibility in administering the specific appropriations by project identified in the annual appropriations act, the commissioner may transfer a part of any item to any other item subject to the approval of the Director of the Division of Budget and Accounting and of the Joint Budget Oversight Committee or its successor. Upon approval of the director and the committee, the transfer shall take effect.

e. Any federal funds which become available to the State for transportation projects which have not been appropriated to the department in the annual appropriations act, shall be deemed appropriated to the department and may, subject to approval by the Joint Budget Oversight Committee and the State Treasurer, be expended for any purpose for which such funds are qualified.

f. There shall be no appropriations from the revenues and other funds of the authority for regular and routine maintenance of public highways and components thereof, or operational activities of the department unrelated to the implementation of, and indirect costs associated with, the capital program. The commissioner shall include in his annual budget request sufficient funding to effectuate the purposes of P.L.2000, c.73 (C.27:1B-21.14 et al.).

g. To the extent that salaries or overhead of the department or the New Jersey Transit Corporation are charged to transportation projects, each agency shall keep adequate and truthful personnel records, and time charts to adequately justify each such charge and shall make those records available to the external auditor to the authority.

h. The commissioner shall annually, on or before January 1 of each fiscal year, report to the Governor and the Legislature how much money was expended in the previous fiscal year for salaries and overhead of the department and the New Jersey Transit Corporation. However, the amount expended from the revenues and other funds of the authority for salaries and overhead of the department and the New Jersey Transit Corporation for the fiscal years beginning July 1, 2001, July 1, 2002 and July 1, 2003 shall not exceed 13 percent of the total funds appropriated from the revenues and other nonfederal funds of the authority for those fiscal years. For the fiscal year commencing July 1, 2006, the amount expended from the revenues and other funds of the authority for salaries and overhead of the department and the New Jersey Transit Corporation shall not exceed 10 percent of the total funds appropriated from the revenues and other nonfederal funds of the authority for that fiscal year. For the fiscal year commencing July 1, 2007, the amount expended from the revenues and other funds of the authority for salaries and overhead of the department and the New Jersey Transit Corporation shall not exceed 8 percent of the total funds appropriated from the revenues and other nonfederal funds of the authority for that year. For the fiscal year commencing July 1, 2008, the amount expended from the revenues and other funds of the authority for salaries and overhead of the department and the New Jersey Transit Corporation shall not exceed 6 percent of the total funds appropriated from the revenues and other nonfederal funds of the authority for that year. For the fiscal year commencing July 1, 2009, the amount expended from the revenues and other funds of the authority for salaries and overhead of the department and the New Jersey Transit Corporation shall not exceed 4 percent of the total funds appropriated from the revenues and other nonfederal funds of the authority for that year. For the fiscal year commencing July 1, 2010, the amount expended from the revenues and other funds of the authority for salaries and overhead of the department and the New Jersey Transit Corporation shall not exceed 2 percent of the total funds appropriated from the revenues and other nonfederal funds of the authority for that year. For the fiscal year commencing July 1, 2011 and each fiscal year thereafter, none of the revenues and other funds of the authority shall be expended for salaries and overhead of the department or the New Jersey Transit Corporation.

i. For the fiscal year commencing July 1, 2006, the amount expended from the revenues and other funds of the authority for permitted maintenance shall not exceed $250,000,000, which amount shall be decreased by at least $50,000,000 in each fiscal year thereafter through the fiscal year commencing July 1, 2011. For the fiscal year commencing July 1, 2012 and each fiscal year thereafter, none of the revenues and other funds of the authority shall be expended for permitted maintenance.

j. In the interest of smart growth principles, the department shall limit the funds programmed for major highway capacity expansion to no more than four percent of the funds appropriated from the revenues and other funds of the authority. "Major highway capacity expansion" means construction of a new section of roadway or the addition of through travel lanes to an existing State highway where such lanes are designed primarily to increase the car carrying capacity of a State highway for more than a half mile. Major highway capacity expansion shall not include: (1) lane additions done primarily at intersections or interchanges; (2) lane additions or extensions designed for auxiliary purposes including but not limited to acceleration, deceleration, or merging or weaving; (3) collector distributor roads designed to improve roadway safety and operation by separating through traffic from local traffic accessing adjacent land uses; (4) projects in Planning Areas 1 or 2 of the State Development and Redevelopment Plan adopted pursuant to P.L. 1985, c.398 (C.52:18A-196, et seq.), which are intended to support smart growth initiatives including but not limited to brownfields redevelopment, or reestablishment or reconfiguration of an existing urbanized area; (5) projects in Planning areas 3, 4 or 5 of the State Development and Redevelopment Plan adopted pursuant to P.L. 1985, c.398 (C.52:18A-196, et seq.), for projects which support one or more designated centers; or (6) any bridge projects.

(cf: P.L.2000, c.73, s.20)

5. Section 8 of P.L.1987, c.460 (C.27:1B-21.1) is amended to read as follows:

8. a. Commencing with the report of the commissioner, as may be amended, required to be submitted pursuant to section 22 of P.L.1984, c.73 (C.27:1B-22) on or before March 1, **[**2000**]** 2006 for the fiscal year commencing July 1, **[**2000**]** 2006 and for each fiscal year thereafter the amount authorized to be reported by the commissioner for proposed projects to be financed shall not exceed **[**$900,000,000 and for the fiscal year beginning July 1, 2001 through the fiscal year beginning July 1, 2003 the annual amounts shall not exceed**]** $1,400,000,000, all amounts exclusive of federal funds.

Notwithstanding the provisions of subsection i of section 9 of P.L.1984, c.73 (C.27:1B-9), if the amount reported by the commissioner exceeds the annual statutory maximum amount of $1,400,000,000, no bonds may be issued by the authority in the following fiscal year.

b. For the fiscal year beginning on July 1, **[**2000**]** 2006 and for each fiscal year thereafter, the total amount authorized to be appropriated from the revenues and other nonfederal funds of the New Jersey Transportation Trust Fund Authority for the projects listed in the appropriations act pursuant to section 21 of P.L.1984, c.73

(C.27:1B-21) shall not exceed **[**$900,000,000 and for the fiscal year beginning July 1, 2001 through the fiscal year beginning July 1, 2003 the annual amounts shall not exceed**]** $1,400,000,000, all amounts exclusive of federal funds.

c. (Deleted by amendment, P.L.1991, c.40.)

d. (Deleted by amendment, P.L.1992, c.10).

e. The State Auditor shall provide for a unified annual audit of expenditures from the Special Transportation Fund, established by section 21 of P.L.1984, c.73 (C.27:1B-21), in order to determine that these funds are expended for costs eligible for funding from the authority and in a manner consistent with appropriations made by the Legislature. The findings of such audits shall be transmitted to the presiding officer of each House of the Legislature, and to the Chair of the Senate Budget and Appropriations Committee, the Senate Transportation Committee, the Assembly Appropriations Committee, and the Assembly Transportation and Communications Committee or their successors.

f. The State Auditor shall review bond issuances of the authority and report to the Joint Budget Oversight Committee and to the members of the Senate Budget and Appropriations Committee and the Assembly Appropriations Committee, or their successors, on the status of the bonds of the authority and projects financed from the proceeds of the bonds. The report shall include the investment status of all unexpended bond proceeds and provide a description of any bond issues expected during a fiscal year, including type of issue, estimated amount of bonds to be issued and the expected month of sale.

(cf: P.L.2000, c.73, s.21)

6. Section 22 of P.L.1984, c.73 (C.27:1B-22) is amended to read as follows:

22. a. To the end that the transportation system of the State shall be planned in an orderly and efficient manner and that the Legislature shall be advised of the nature and extent of public highways, public transportation projects and other transportation projects contemplated to be financed under this act, the department shall submit a master plan, as provided in subsection (a) of section 5 of P.L.1966, c.301 (C.27:1A-5). Notwithstanding the provisions of that act, the plan shall be for a period of five years and shall be submitted to the Commission on Capital Budgeting and Planning, the Chairman of the Senate Transportation Committee and the Chairman of the Assembly Transportation and Communications Committee, or their successors, and the Legislative Budget and Finance Officer, and the metropolitan planning organizations, on or before March 1, 2001, and at five-year intervals thereafter. The master plan shall set the direction for the department's overall Capital Investment Strategy and subsequent annual Transportation Capital Programs submitted to the Legislature

for approval pursuant to this section.

b. The Department of Transportation, in conjunction with the New Jersey Transit Corporation, shall prepare a "Capital Investment Strategy" for at least a five-year period which shall contain, at a minimum, a statement of the goals of the department and the corporation in major selected policy areas and the means by which the goals are to be attained during that period, using quantitative measures where appropriate. The Capital Investment Strategy may be updated and submitted no later than March 1 of each year. The Capital Investment Strategy shall provide for a multi-modal, intermodal, seamless and technologically advanced transportation system. It shall recommend investment for major program categories, set overall goals for investment in the State's infrastructure, and develop program targets and performance measures. It may rely on infrastructure management systems as developed by the department to assess bridge conditions, pavement conditions, bridge, traffic and pedestrian safety, traffic congestion and public transit facilities. With respect to pavement conditions, the department shall set as a priority the utilization of efficient cost-effective materials and treatments as stated in section 9 of P.L.2000, c.73 (C.27:1B-21.22). In the event that there exist appropriate circumstances for the use of micro-surfacing and cold-in-place recycling, the department shall establish as a special priority the use of these materials and surface treatments. The goals of the Capital Investment Strategy shall include, but not be limited to, reduction of vehicular and pedestrian accidents, reduction in the backlog of projects, including one-half of the structurally deficient bridge repair projects and pavement deficiencies, and an increase in lane miles of bicycle paths, with a goal of constructing an additional 1,000 lane miles of bicycle paths in five years to reduce traffic congestion and for recreational uses. The construction of bicycle and pedestrian lanes, paths and facilities shall be subject to no stricter environmental requirements than are provided pursuant to federal law and regulations for such lanes, paths and facilities, notwithstanding the provisions to the contrary of State law and regulations, including State Executive Order No. 215 of 1989. With respect to the New Jersey Transit Corporation, the plan shall deal with the corporation's goals in the area of bus transportation and present a strategy and a preliminary timetable for the replacement of the current diesel bus fleet with a fleet of buses which have reduced emission of air pollutants. The corporation shall consider the feasibility of buses with improved pollution controls and that reduce particulate emissions and buses powered by fuel other than conventional diesel fuel, such as compressed natural gas vehicles, hybrid vehicles, fuel cell vehicles, biodiesel vehicles, vehicles operated on ultra low sulfur fuel, vehicles operated on any other bus fuel approved by the United States Environmental Protection Agency, and the like. The corporation may

consider as part of its strategy, cooperative efforts with bus manufacturers, and the solicitation of federal support, in developing a "clean bus" with air pollution controls superior to currently available technology. For the fiscal year beginning July 1, 2007 and each fiscal year thereafter, all buses purchased by the New Jersey Transit Corporation shall be buses with improved pollution controls and that reduce particulate emissions or buses powered by fuel other than conventional diesel fuel, such as compressed natural gas vehicles, hybrid vehicles, fuel cell vehicles, biodiesel vehicles, vehicles operated on ultra low sulfur fuel, vehicles operated on any other bus fuel approved by the United States Environmental Protection Agency, and the like. In the event that the corporation is not able to meet the bus purchase requirements set forth in this section with respect to any fiscal year, prior to the commencement of the fiscal year the board of the corporation shall by resolution submit a report to the Legislature detailing its inability to meet the requirements and the reasons therefor and shall submit the report to the Senate and General Assembly when both houses are in session, including therein a request to be exempted from the bus purchase requirements of this section with regard to the fiscal year in question. The President of the Senate and the Speaker of the General Assembly shall cause the date of submission to be entered upon the Senate Journal and the Minutes of the General Assembly. If a joint resolution approving the exemption is passed by the Legislature and signed by the Governor prior to the commencement of the fiscal year in question, the corporation shall be exempt from the requirements for that fiscal year.

The **[**plan**]** strategy shall also detail the planned investment of capital funds for public transportation projects of companies other than the New Jersey Transit Corporation engaged in the business of providing motor bus transportation. The **[**plan**]** strategy shall demonstrate that such investment adequately addresses the finding in section 2 of P.L.1979, c.150 (C.27:25-2) that in the provision of public transportation services it is desirable to encourage to the maximum extent feasible the participation of private enterprise.

c. On or before March 1 of each year, the commissioner shall submit a report of general project categories and proposed projects thereunder to be financed in the ensuing fiscal year, including therewith a description of the projects, the county or counties within which they are to be located, a distinction between State and local projects, and the amount estimated to be expended on each project. This report shall be known as the "Annual Transportation Capital Program" for the upcoming fiscal year. It shall include proposed projects of both the Department of Transportation and the New Jersey Transit Corporation. The program shall be consistent with, and reflective of, the goals and priorities of the Capital Investment Strategy and the program shall include an explanation which

demonstrates how it is consistent with, and reflective of, the goals and priorities.

d. On or before March 1 of each year, the commissioner shall also submit a "Transportation Trust Fund Authority Financial Plan" designed to implement the financing of the proposed projects. The financial plan shall contain an enumeration of the bonds, notes or other obligations of the authority which the authority intends to issue, including the amounts thereof and the conditions therefor. The financial plan shall set forth a complete operating and financial statement covering the authority's proposed operations during the ensuing fiscal year, including amounts of income from all sources, including but not limited to the proceeds of bonds, notes or other obligations to be issued, as well as interest earned. In addition, the plan shall contain proposed amounts to be appropriated and expended, as well as amounts for which the department anticipates to obligate during the ensuing fiscal year for any future expenditures.

e. The Capital Investment Strategy, the Annual Transportation Capital Program, and the Transportation Trust Fund Authority Financial Plan shall be submitted to the Senate and General Assembly. Within 30 days of the receipt thereof, the Senate or the General Assembly may object in writing to the commissioner in regard to any project or projects in the Annual Transportation Capital Program it disapproves or which it is of the opinion should be modified or added to or any additional or alternative projects considered or in regard to any element of the financial plan. The commissioner shall consider the objections and recommendations and resubmit the report within 10 days, containing therein any modifications based upon the commissioner's consideration of the objections or recommendations.
(cf: P.L.2000, c.73 s.22)

7. Section 25 of P.L.1984, c.73 (C.27:1B-25) is amended to read as follows:

25. a. Notwithstanding the provisions of subtitle 4 of Title 27 of the Revised Statutes and P.L.1946, c.301 (C.27:15A-1 et seq.), the commissioner may, pursuant to appropriations or authorizations being made from time to time by the Legislature according to law, allocate to counties and municipalities funds for the planning, acquisition, engineering, construction, reconstruction, repair, resurfacing and rehabilitation of public highways and the planning, acquisition, engineering, construction, reconstruction, repair, maintenance and rehabilitation of public transportation projects and of other transportation projects which a county or municipality may be authorized by law to undertake. In the case of a county or municipality for which an allocation has been made for the federal fiscal year beginning October 1, 1983, of an amount of federal aid for the federal aid urban system, as defined in 23 U.S.C. s.103, the amount of State

aid allocated under this section in any fiscal year shall not be less than the amount of federal aid so allocated, together with the amount of matching funds required under federal law. No allocation shall be made to a county or municipality without certification by the commissioner: (1) that there exists with respect to that county or municipality a comprehensive plan, or plans, which he has approved, for the effective allocation, utilization and coordination of available federal and State transportation aid, and (2) that the county or municipality has agreed that State aid provided under this section is provided in lieu of federal aid for the federal aid urban system program and that any federal aid for the federal aid urban system program attributable to the area will be programmed by the Department of Transportation for projects of regional significance. In any year in which insufficient funds have been appropriated to meet the minimum county allocations established in this section, or if no appropriation is provided, the commissioner shall determine on a prorated basis the amount of the deficiency for each county having a minimum allocation and allocate from funds available under the federal aid urban system program sufficient funds to meet the minimum allocations.

b. The commissioner shall, pursuant to appropriations or authorizations being made from time to time by the Legislature according to law and pursuant to the provisions of subsection d. of this section, allocate at his discretion State aid to municipalities for public highways under their jurisdiction and for emergency transportation projects, except that the amount to be appropriated for this program shall be 15% of the amount appropriated pursuant to the provisions of paragraph (2) of subsection d. of this section.

c. The commissioner shall, pursuant to appropriations or authorizations being made from time to time by the Legislature according to law and pursuant to the provisions of subsection d. of this section, allocate State aid to municipalities for public highways under their jurisdiction, except that the amount to be appropriated for this purpose shall be 85% of the amount appropriated pursuant to the provisions of paragraph (2) of subsection d. of this section. The amount to be appropriated shall be allocated on the basis of the following distribution factor:

$$DF = \frac{Pc}{Ps} + \frac{Cm}{Sm}$$

where, DF equals the distribution factor

Pc equals county population

Ps equals State population

Cm equals municipal road mileage within the county

Sm equals municipal road mileage within the State.

After the amount of aid has been allocated based on the above formula, the commissioner shall determine priority for the funding of municipal projects within each county, based upon criteria relating to volume of traffic, safety considerations, growth potential, readiness to obligate funds and local taxing capacity. In addition to the above criteria used in determining priority of funding of municipal projects in each county, the commissioner shall consider whether a project is intended to remedy hazardous conditions as identified for the purposes of providing transportation pursuant to N.J.S.18A:39-1.2 for school pupils.

For the purposes of this subsection, (1) "population" means the official population count as reported by the New Jersey Department of Labor; and (2) "municipal road mileage" means that road mileage under the jurisdiction of municipalities, as determined by the department.

d. There shall be appropriated at least **[**$30,000,000.00 in each fiscal year**]**$200,000,000 for the fiscal year commencing on July 1, 2006 and for each fiscal year thereafter, for the purposes provided herein and in subsections b. and c. of this section. (1) Of that appropriation, the commissioner shall allocate $5,000,000.00 as State aid to any municipality qualifying for aid pursuant to the provisions of P.L.1978, c.14 (C.52:27D-178 et seq.). The commissioner shall allocate the aid to each municipality in the same proportion that the municipality receives aid under P.L.1978, c.14. (2) The remaining amount of the appropriation shall be allocated pursuant to the provisions of subsections b. and c. of this section.

(cf: P.L.1995,c.99)

8. Section 9 of P.L.1995, c.108 (C.27:1B-25.1) is amended to read as follows:

9. **[**State aid**]** Aid to counties and municipalities **[**pursuant to section 25 of P.L.1984, c.73 (C.27:1B-25),**]** administered by the department may, at the discretion of the commissioner, be disbursed to any individual county or municipality on a grant basis or on a cost reimbursement basis.

(cf: P.L.1995, c.108, s.9)

9. (New section) There is hereby created in the Executive Branch of the State Government, a body corporate and politic, with corporate succession, to be known as the Financial Policy Review Committee. For the purpose of complying with the provisions of Article V, Section IV, paragraph 1 of the New Jersey Constitution, the committee is hereby allocated within the Department of Transportation, but, notwithstanding that allocation, the committee shall be independent of any supervision or control by the department or by any body or officer thereof. The committee is hereby constituted as an instrumentality of the State exercising public and essential governmental functions, and the exercise by the committee of the powers conferred by this act shall be deemed and held to be an essential governmental function of the State.

The committee shall be comprised of five public members with experience in public or corporate finance. The Governor shall appoint one of the members with the advice and consent of the Senate. The remaining members shall be appointed by the Governor as follows: one upon recommendation of the President of the Senate, one upon recommendation of the Speaker of the General Assembly, one upon recommendation of the Minority Leader of the Senate, and one upon recommendation of the Minority Leader of the General Assembly. Each public member shall serve for a four-year term and shall serve until the member's successor is appointed. Of the public members first appointed pursuant to this section, the member appointed by the Governor with the advice and consent of the Senate shall serve for four years. The members appointed upon recommendation of the President of the Senate and the Speaker of the General Assembly shall serve for three years each, and the remaining two members shall serve for two years each. The committee shall be deemed to be constituted immediately upon appointment and qualification in the manner provided in this section of at least three public members.

The purpose of the committee is to assure fiscal discipline through evaluating the financing of transportation and preparing an annual State of Condition of Transportation Financing certification. The certification shall ensure that the financing and expenditures of the New Jersey Transportation Trust Fund Authority (the "authority") adhere to certain standards. These standards are:

a. The bonding limitation of 50 percent of the annual authorized amount reported for proposed projects in section 8 of P.L.1987, c.460 (C.27:1B-21.1) of $1,400,000,000 shall be observed by the authority, as provided in subsection i. of section 9 of P.L.1984, c.73 (C.27:1B-9). However, as provided in subsection i. of section 9 of P.L.1984, c.73 (C.27:1B-9), for any fiscal year in which the amount reported by the commissioner, pursuant to subsection a. of section 8 of P.L.1987, c.460 (C.27:1B-21.1) does not exceed the authorized amount permitted but the total amount appropriated from the revenues and

other nonfederal funds of the New Jersey Transportation Trust Fund Authority for projects listed in the appropriations act pursuant to section 21 of P.L.1984, c.73 (C.27:1B-21) exceeds the maximum authorized annual amount for such appropriations established in section 8 of P.L.1987, c.460 (C.27:1B-21.1), the maximum principal amount of new debt that the authority is authorized to incur in that fiscal year or to carry forward shall be reduced by an amount equal to the amount by which the appropriation exceeds the maximum authorized annual amount for appropriations.

b. For the fiscal year commencing July 1, 2006, the amount expended from the revenues and other funds of the authority for salaries and overhead of the department and the New Jersey Transit Corporation shall not exceed 10 percent of the total funds appropriated from the revenues and other nonfederal funds of the authority for that fiscal year and shall decrease annually by the amount provided in subsection h. section 21 of P.L.1984, c.73 (C.27:1B-21).

c. For the fiscal year commencing July 1, 2006, the amount expended from the revenues and other funds of the authority for permitted maintenance shall not exceed $250,000,000 and shall decrease annually by the amount provided in subsection i. section 21 of P.L.1984, c.73 (C.27:1B-21).

d. The total amount authorized to be appropriated from the revenues and other funds of the authority for project costs shall not exceed $1,400,000,000 annually.

Beginning in fiscal year 2006-2007, the committee shall submit to the Governor, the Legislature, and the commissioner on an annual basis the State of Condition of Transportation Financing certification. The certification shall be based on the committee's review of the State's fiscal year final expenditures from the preceding fiscal year ending June 30 of each year, including bonding and expenditures from the annual independent audit of the authority, and the amount of authority funds programmed for permitted maintenance. If the capital program and its financing are found to be in compliance, the first annual certification shall be issued by February 1, 2007, after the certification is concurred with by the members of the authority, and by February 1 of each year thereafter.

The committee shall advise the commissioner on February 1, 2007 and on each succeeding February 1, if the committee finds that the department is not in compliance with the bonding requirements as provided in subsection a. of this section, and that a corrective action plan is needed. The department shall submit a corrective action plan that would reduce its future bond sales to offset the amount of excess bonding or to reduce future debt service payments, or both, as the case may be. Upon approval of the corrective action plan by the committee, the certification shall be issued with certain conditions. The Annual Transportation Capital Program submitted to the

Legislature for the forthcoming year shall be in compliance with the provisions of the corrective action plan. If the committee does not approve the corrective action plan, the authority shall submit a financial plan showing bonding only for existing projects, noting that no bonds shall be issued for new projects shown in the department's Annual Transportation Capital Program.

The committee shall advise the commissioner on February 1, 2007 and on each succeeding February 1, if the committee finds that the Department of Transportation has exceeded the limitation for the amount of authority funds spent on permitted maintenance or salaries or overhead pursuant to subsection b. or subsection c. of this section, or for the amount authorized to be appropriated for project costs pursuant to subsection d. of this section and that a corrective action plan is needed. The department shall submit a corrective action plan that would offset the excess amount spent, or the excess amount appropriated, in the prior year with less funding for permitted maintenance or salaries or overhead or for projects, as the case may be, in the proposed capital budget request. Upon approval of the corrective action plan by the committee, the certification shall be issued with certain conditions. The Annual Transportation Capital Program submitted to the Legislature for the forthcoming year shall be in compliance with the provisions of the corrective action plan. If the committee does not approve the corrective action plan, the authority shall submit a financial plan showing bonding only for existing projects, noting that no bonds shall be issued for new projects shown in the department's Annual Transportation Capital Program. A member of the Financial Policy Review Committee who falsely certifies that the financial standards provided in this section have been met, shall, in addition to immediate disqualification for office, be subject to a fine of $5,000. A member of the authority who falsely concurs with the certification provided herein shall, in addition to immediate disqualification for office, be subject to a fine of $5,000.

The authority shall not be permitted to issue debt for new projects without a certification from the committee having been submitted to the Governor and the Legislature.

10. This act shall take effect immediately.

STATEMENT

This bill will take initial steps to restore the fiscal integrity of the Transportation Trust Fund Authority (TTFA) and return it to its purpose of providing a stable, reliable source of funding for "pay-as-you-go" transportation capital projects. Currently the Trust Fund has more than $7 billion of debt and increasing amounts of the fund's

revenues are going for debt service rather than paying for transportation construction projects. The key provisions of this bill are summarized below:

Funding Cap

- The bill makes the authorized funding provisions of the Transportation Trust Fund Act permanent with an annual authorized project amount of $1.4 billion, exclusive of federal funds.

Restoring Fiscal Integrity

- The TTFA's annual bonding authority is limited to 50 percent of the maximum authorized statutory amount for proposed projects.

- The TTFA's ability to carry forward unused bonding authority would be limited to only three years, with a maximum of $1 billion in any three-year period.

- The bill would deter the Commissioner of Transportation from reporting a proposed project amount that exceeds the statutorily authorized amount by means of a "poison pill" provision that would preclude the issuance of any bonds during the following fiscal year.

- The bill would deter the Legislature from passing an appropriations act in which the annual amount authorized for projects exceeds the statutory limit. The bill provides that the maximum amount of authorized new debt will be reduced by an amount equal to the amount by which the appropriation exceeds the statutorily-authorized amount.

- The bill provides for the reduction and elimination over a six-year period of the amount expended from the TTF for salaries and overhead by the Department of Transportation and the New Jersey Transit Corporation.

- The bill provides for the reduction and elimination over a six-year period of the amount expended from the TTF for permitted maintenance.